



**An Independent Assessment Performed by
Booz-Allen & Hamilton, Inc.**

Study of the Effects of the Department of Energy's Work Force Restructuring and Community Transition Plans and Programs

**Prepared under DOE Contract
DE-AD01-98WT000B1.A000**

September 30, 1998

Table of Contents

Executive Summary	1
Chapter 1 Introduction, Scope and Methodology	1-1
1.1 Background	1-1
1.2 Scope	1-2
1.3 Methodology	1-3
Chapter 2 Job Retention and Creation	2-1
2.1 Worker Transition Job Retention and Creation.....	2-2
2.1.1 Internal Placement and Worker Retraining Effects.....	2-3
2.1.2 Transfers, Relocation, and Preference-in-Hiring Effects	2-3
2.1.3 Outplacement Services	2-4
2.1.4 Separated Worker Retraining and Education	2-5
2.1.5 Worker Transition Summary Results	2-7
2.2 Community Transition Job Creation and Retention.....	2-7
2.2.1 Community Transition Program Jobs Created and Retained	2-8
2.2.2 Business Development and Expansions.....	2-11
2.3 Total Job Creation and Retention.....	2-13
2.4 Findings	2-13
Chapter 3 Other Benefits and Effects from Worker and Community Transition Programs.....	3-1
3.1 Accelerated Site Closure and Transfer.....	3-1
3.1.1 Mound, Ohio	3-1
Case Study 1 Mound Advanced Technology Center – An Early Site Closure	3-2
3.1.2 Pinellas, Florida.....	3-6
Case Study 2 Pinellas – An Early Site Closure.....	3-7
3.2 Reuse of Facilities Undergoing Cleanup.....	3-10
3.3 Reduced Lawsuits and Workplace Violence.....	3-10
3.4 Leveraged Funding.....	3-12
3.5 Promoting a Skilled and Productive Work Force.....	3-12
3.5.1 Work Force Restructuring Offers.....	3-12
3.5.2 Future Restructuring Needs and Work Force Planning	3-14
3.5.3 Bargaining Unit and Other Personnel Impacts.....	3-14
3.5.4 Remaining Work Force Separation Liability	3-14
3.5.5 Worker Medical Benefits and Costs.....	3-14
3.6 Findings	3-15
Chapter 4 Funding and Expenditures.....	4-1
4.1 OWCT Funding FY 1994 – FY 1997.....	4-1
4.2 OWCT Expenditures FY 1994 – FY 1997.....	4-2
4.3 OWCT Uncosted Funds FY 1994 – FY 1997	4-5
4.4 Work Force Restructuring Funds FY 1994 – FY 1997	4-5
4.5 Work Force Restructuring Expenditures FY 1993 – FY 1997.....	4-7
4.6 Community Transition Funding FY 1994 – FY 1997.....	4-9

4.7 Community Transition Expenditures FY 1994 – FY 1997	4-10
4.8 Findings	4-10
Chapter 5 DOE Guidance and Program Criteria	5-1
5.1 Work Force Restructuring Guidance.....	5-2
5.2 Community Transition Guidance	5-12
5.3 Findings	5-13
Chapter 6 Comparison with Other Restructuring Programs.....	6-1
6.1 DOE Work Force Restructuring Benefits and Costs.....	6-1
6.2 DOD Work Force Restructuring Benefits and Costs	6-2
6.3 Comparison of Average Benefit Cost per Worker	6-4
6.4 Other Federal Agency Community Assistance Programs	6-4
6.4.1 Other Federal Agency Community Assistance Program Provisions and Benefits.....	6-5
6.4.2 DOE Community Assistance Program Benefits	6-7
6.5 Commercial Practices for Facility Closures.....	6-9
6.5.1 Commercial Practices Comparison	6-9
6.5.2 Commercial Voluntary Separation Benefits Costs Comparison	6-10
6.6 Findings	6-10
Appendix A Representative Sample of Companies by Site Receiving Community Transition Assistance	A-1
Appendix B Economic Diversity at DOE Sites	B-1
Appendix C Organizations Contacted	C-1
Appendix D Source Materials	D-1
Appendix E List of Acronyms	E-1

Executive Summary

This report presents the results of Booz·Allen and Hamilton's study of the effects of work force restructuring plans for defense nuclear facilities developed pursuant to Section 3161 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 1993. The study scope was defined in Section 3153 of the NDAA for FY 1998 to include independent analyses of:

- The number of jobs created by employee retraining, education and re-employment assistance, and community transition assistance
- Other benefits provided pursuant to work force restructuring plans
- Funds expended, and funds obligated but not expended
- The criteria used since October 23, 1992 in providing assistance
- A comparison of similar benefits provided to employees terminated at largely Department of Defense (DOD) facilities experiencing more than a 15% employee reduction due to defense cutbacks

This report comprehensively addresses each of these areas.

ES-1 Background And The DOE Transition

The provisions for mitigating the social and economic impacts of work force restructuring activities at the Department of Energy (DOE) were enacted in Section 3161 of NDAA for FY 1993. The Office of Worker and Community Transition (OWCT) was established on September 15, 1994, to administer the requirements of the Act and to help address a number of Department-wide transitions stemming directly from the end of the cold war and reduction in the Soviet nuclear threat. The transition was deemed to most directly affect the 148,000 on-site, primarily Management and Operations (M&O), contractor employees as part of the DOE "Government Owned-Contractor Operated" (GOCO) complex who were viewed as those who "helped win the cold war".

The end of the cold war required major transitions including substantial reductions in work force, resulting in economic dislocation in adjacent communities. In nine of these communities, DOE is the primary employer. Specific transitions being addressed by DOE include:

- Reductions in the on-site contractor work force from approximately 148,000 to 105,000 (29%) through FY 1997.
- Exit by DOE as an employer from 5 of the major sites and dozens of smaller sites around the country, with the transition requiring 4 to 50+ years depending upon the site.

- Restructuring of the remaining work force from primarily R&D and production activities to environmental management and remediation activities as well as pursuing “new ways of doing business,” including privatization of some facilities and operations.

The worker and community transition program was established to mitigate adverse social and economic impacts on affected communities such as:

- Economic health of the community, especially in the nine areas where the sites are the top employer in the community.
- Specific workers whose continued employment is terminated or who must be retrained for new types of jobs.

To address these dual but interrelated needs, the OWCT set up two programs:

- The work force restructuring program based upon restructuring plans prepared by each site in accordance with Section 3161 and applicable guidance, that typically address:
 - Severance
 - Enhanced Retirement Benefits
 - Training/Retraining
 - Medical Benefits
 - Outplacement
 - Relocation
- The community transition program which provides funds and grants to encourage community business development efforts, assists in economic diversification, and encourages technology transfer activities.

Both worker and community “transitions” typically occur simultaneously at a site.

The work force restructuring program is lead by OWCT at headquarters and assisted by the 11 DOE Operations Offices, working in conjunction with their major contractors, while the community transition program is lead by OWCT and administered by the DOE Operations Offices working more directly with local organizations such as Community Reuse Organizations (CROs) through grant and other funding programs.

Figure A summarizes the magnitude of major site transitions. As shown, from 1993 through 1997, M&O contractor on-site employment at the 17 Defense Nuclear Sites eligible for the 3161 Program was reduced by 42,449 or 29 percent.¹ The most severely affected have been five major sites whose defense mission has been largely eliminated – Richland, Fernald, Mound, Pinellas, and Rocky Flats. Significant impacts also were

¹ Portsmouth and Paducah sites are included in the Oak Ridge M&O.

incurred at Nevada, Savannah River, Idaho, and Oak Ridge where continuing missions exist. Figure A also indicates which communities have formed active CROs.

Figure A. Summary of Site Transitions, FY 1993-1997

State	Site	Work Force Transition					Community Transition	
		Sept. 1997 Management Contractor Team Employment ⁴	1993-1997 Employment Reduction ⁵		Unemployment Rates		CRO Established	FY 1994- FY 1997 # of Business Supported
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CA	Lawrence Livermore ¹	6,403	1,916	23	6.6	4.4	Not Requested	0
CO	Rocky Flats ¹	3,410	4,281	56	4.5	2.8	Yes	375
FL	Pinellas ¹	5	1,248	99	6.0	3.4	Yes	213
ID	Idaho ¹	5,868	1,945	25	4.4	3.9	Yes	92
IL	Argonne ¹	3,809	583	11	N/A	N/A	Not Requested	0
MO	Kansas City ¹	3,679	1,205	25	5.2	3.7	Not Requested	0
NM	Carlsbad ¹	636	139	18	N/A	N/A	Not Requested	0
	Los Alamos ¹	6,687	892	12	1.3	1.7	Yes	10
	Sandia ¹	7,576	1,558	17	7.0	4.3	Pending ²	1
NV	Nevada ¹	2,345	4,129	64	7.3	4.0	Yes	39
NY	Brookhaven ¹	3,073	671	18	N/A	N/A	Not Requested	0
OH	Fernald ¹	1,989	1,007	34	6.6	3.5	Yes	1
	Mound ¹	740	1,011	58	5.4	4.0	Yes	19
SC	Savannah River ¹	13,231	6,870	34	8.1	6.0	Yes	28
TN	Oak Ridge ¹	14,046	3,837	21	5.7	7.3	Yes (3 ⁶)	138
TX	Pantex ¹	2,920	407	12	3.8	4.5	Not Requested	0
WA	Richland ¹	11,137	7,536	40	7.0	6.6	Yes	339
Other Sites ³		17,550	3,214	12	N/A	N/A	Not Applicable	N/A
Totals		105,104	42,449	29			13	1,254

¹ Indicates DOE's listing of Defense Nuclear Facilities during FY 1997

² Site has applied for Community Transition planning funds

³ A total of 14 Non-Defense Sites received limited amounts of assistance from 1994 to 1997

⁴ Employment estimates are based on data provided by OWCT

⁵ Employment reduction is based on an accounting of separated employees and may not account for new hires, relocations, or transfers

⁶ Oak Ridge, Paducah and Portsmouth have formed CROs

The sections which follow summarize Booz-Allen's analysis of the effects of the worker and community transition programs in helping DOE to mitigate the adverse social and economic impacts of this major transition.

ES-2 Estimated Number of Jobs Created

As noted above, the overall mission of the OWCT is to minimize the social and economic impact of changes in the Department's activities. One element of minimizing this impact is to create jobs for displaced workers. Jobs can be created either internally through retraining and placement of the worker in a new job in DOE, or externally through creation and placement of separated workers in new jobs. Of the 42,449 workers terminated from facilities described above, an estimated 37,097 workers did not retire and thus in most cases needed new jobs.

Booz-Allen was able to establish that OWCT efforts to meet this need did "create" or retain 22,348 jobs. Figure B below, summarizes the estimated number of jobs created at each site during the 1993-1997 period.

Figure B. Estimated Jobs Created/Retained

State	Site	Community Transition Program	Worker Transition Program	Total
CA	LLNL	0	21	21
CO	Rocky Flats	1,191	3,017	4,208
FL	Pinellas	1,323	347	1,607
ID	Idaho	674	376	1,050
IL	Argonne	0	35	35
MO	Kansas City	0	200	200
NM	Los Alamos	570	95	665
	Ross Aviation	0	16	16
	Sandia	0	131	131
NV	Nevada	1,645	846	2,491
NY	Brookhaven	0	23	23
OH	Fernald	0	33	33
	Mound	260	505	765
	Portsmouth	60	3	63
SC	Savannah River	2,117	2,827	4,944
TN	Oak Ridge	2,901	1,189	4,090
TX	Pantex	0	85	85
WA	Richland	762	926	1,688
Totals		11,503	10,845	22,348

As shown in Figure B, 11,503 jobs were created or retained by the community transition program. The worker transition program, in addition to providing severance, also supported efforts for workers to obtain new jobs. These efforts resulted in an estimated 10,845 jobs retained or created. These 22,348 jobs were created even while total prime contractor employment in defense nuclear production declined by 42,449 over the four-year period. Job creation was undoubtedly a major factor in mitigating worker and economic disruptions in the community.

ES-3 Other Community and Work Force Transition Program Benefits

Achieving the goal of minimizing social and community impacts from work force restructuring includes more than a focus on job creation. It also includes maintaining a skilled and productive work force for the Department and more expeditiously transitioning facilities that are closing into productive use for the community.

Retaining a skilled and productive work force as facilities are being closed is supported by several OWCT transition activities to maintain morale and provide a safe working environment.

- Applying benefits programs fairly and consistently appears to have minimized the incidence of work place violence and legal challenges. For example, interview results indicated no examples of work place deaths as a result of violence or of class action legal challenges attributed to work force restructuring.
- Offering early retirement and other voluntary separation programs resulted in the amicable separation of more than 30,000 contractor employees.
- Preparing workers for site closure and transition is being completed through offering benefits such as retraining to key workers in exchange for continuing to work at DOE facilities and no future termination benefits.

OWCT worked with the CROs at Pinellas and Mound to identify community uses for these facilities. Industrial use of these facilities may have saved or will save DOE more than \$1 billion in cleanup costs. The CROs also worked with OWCT and EM to accelerate the transfer so that communities could take advantage of development opportunities. Early transfer saved more than \$100 million in landlord and maintenance costs. Similar reuse efforts of facilities and equipment are taking place at seven other sites.

Our review shows that OWCT efforts in these areas were effective and highly important for DOE to achieve its transition goals.

ES-4 Funds Obligated, Expended and Uncosted

From FY 1994 through FY 1997, the worker and community transition program was appropriated \$467.5 million, obligated \$461.5 million, and expended \$405.3 million. Figure C summarizes program obligations and expenditures by site. The figure shows the sites receiving the most work force restructuring funds were Rocky Flats, Pinellas and Nevada. The sites receiving the most OWCT community transition funds were Oak Ridge, Rocky Flats and Savannah River.

Figure C. Program Funding and Expenditures by Site

State	Site	OWCT-3161 Funds Obligated FY 94-FY97			OWCT-3161 Funds Expended FY94-FY97			Total Reported Site Expenditures*
		Work Force Restructuring	Community Transition	Total	3161-Funded Work Force Restructuring	3161-Funded Community Transition	Total 3161- Funded Expenditures	
CA	Lawrence Livermore	\$8,000,000		\$8,000,000	\$8,000,000		\$8,000,000	\$21,169,608
	ETEC		\$500,000	\$500,000		\$500,000	\$500,000	\$500,000
CO	Rocky Flats	\$60,099,492	\$20,689,001	\$80,788,493	\$59,557,421	\$20,124,949	\$79,682,370	\$124,370,685
FL	Pinellas	\$41,549,000	\$17,704,000	\$59,253,000	\$41,549,000	\$12,505,231	\$54,054,231	\$62,913,087
ID	Idaho	\$1,273,924	\$14,325,000	\$15,598,924	\$672,902	\$13,749,118	\$14,422,020	\$53,939,762
IL	Argonne		\$112,500	\$112,500		\$112,500	\$112,500	\$10,229,779
KS	Kansas City	\$19,278,000		\$19,278,000	\$19,278,000		\$19,278,000	\$25,403,135
NM	Carlsbad		\$2,000,000	\$2,000,000		\$1,844,392	\$1,844,392	\$1,844,392
	Ross Aviation	\$413,000		\$413,000	\$413,000		\$413,000	\$694,870
	Los Alamos	\$13,299,659	\$4,730,000	\$18,029,659	\$11,316,460	\$2,939,840	\$14,256,300	\$14,256,300
	Sandia	\$15,550,000	\$105,000	\$15,655,000	\$15,306,540	\$13,483	\$15,320,023	\$23,866,296
NV	Nevada	\$37,718,713	\$8,918,379	\$46,637,092	\$29,795,045	\$6,507,394	\$36,302,439	\$42,358,104
NY	Brookhaven							\$5,416,009
OH	Mound	\$22,778,003	\$14,500,000	\$37,278,003	\$23,043,215	\$7,984,851	\$31,028,066	\$30,928,066
	Fernald	\$3,506,000	\$150,100	\$3,656,100	\$3,297,139	\$150,100	\$3,447,239	\$16,213,957
SC	Savannah River	\$28,102,161	\$17,522,539	\$45,624,700	\$28,386,712	\$10,948,323	\$39,335,035	\$138,328,955
TN	Oak Ridge**	\$33,178,257	\$33,743,595	\$66,921,852	\$29,569,056	\$26,961,953	\$56,531,009	\$77,292,523
TX	Pantex	\$6,700,000		\$6,700,000	\$6,700,000		\$6,700,000	\$49,432,392
WA	Richland	\$4,623,000	\$12,744,000	\$17,367,000	\$4,623,000	\$4,137,666	\$8,760,666	\$138,070,699
	Program Support			\$16,549,697			\$15,374,515	\$15,374,515
Totals		\$296,069,209	\$148,932,060	\$461,550,972	\$281,507,490	\$108,479,800	\$405,361,805	\$852,603,134

* Includes all reported expenditures by DOE Field Offices

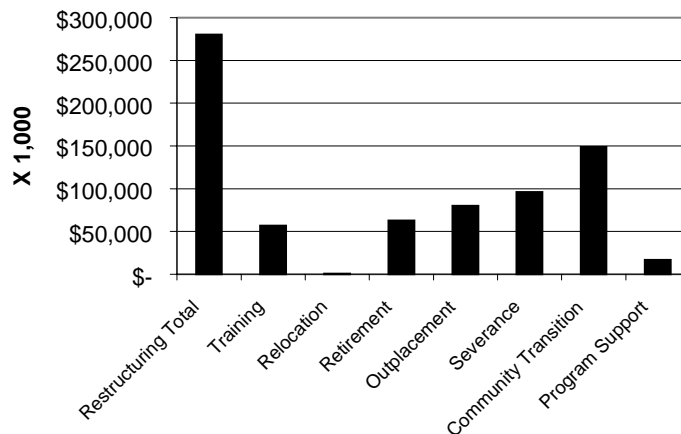
** Includes Paducah and Portsmouth Gaseous Diffusion Plants

The expenditures shown in the last column of Figure C include costs which were reported by OWCT as incurred by other DOE programs including the Defense and Environmental Management programs in addition to the directly appropriated Section 3161 fund. The expenditures of non-Section 3161 funds were reported to be approximately \$447.3 million. The OWCT expenditures under Section 3161 funding are approximately \$405.3 million for both Community Transition and Work Force Restructuring.

As shown in Figure D, below, work force restructuring activities required the most funding with \$296 million of obligated funding for the following categories of benefits: training, relocation, retirement, outplacement and severance. Severance benefits comprised more than 30% of the expended work force restructuring funds.

Community transition funding was approximately \$150 million of the total obligated funds, or one-third of the total. More recently however, Community Transition funding is more than one-half the total obligated funding. For FY 1997, approximately \$40 million of OWCT's \$75 million budget was for community transition.

Figure D. Program Funding by Category



ES-5 Criteria Used to Provide Assistance

The principal criteria for providing assistance to DOE sites and adjacent communities was degree of need, driven by how many workers were impacted by the transition. This need was documented in the work force restructuring plans mandated by Section 3161. Guidance for funding generally specified that work force transition funds should be in the range of \$15,000 to \$25,000 per separated worker. Job creation assistance was targeted at \$10,000 to \$25,000 in federal contributions received per job created .

To further assist in planning, the OWCT issued and updated guidance for both the work force restructuring program and the community transition program.

- Work Force Restructuring Guidance—Issued in April 1993 and subsequently revised four times to include the following clarifications:
 - Work force restructuring plan requirements expanded
 - Outplacement assistance for separated workers encouraged
 - Relocation assistance capped at \$2,000-5,000 per worker
 - Workers were required to certify intent to use preference-in-hiring
- Community Transition Guidance—Issued in March 1994 and updated in February 1997 to include the following enhancements:
 - Guidelines for recognition by the Department of a CRO
 - Description of DOE and CRO roles/responsibilities
 - Requirement for a program review process and reporting
 - Establishment performance measures

Booz-Allen’s review indicated that the guidances were responsive to the Section 3161 requirements, and that updates were appropriately handled to clarify issues and provide guidance in response to shifting policies.

ES-6 Comparison of Benefits

Booz-Allen’s review of work force separation benefits indicate that the DOE benefits are similar to those provided at contractor facilities undergoing defense restructuring in response to reduced DOD funding and procurement.

Figure E, below, summarizes average worker benefit costs provided by DOE and compares them to DOD facilities experiencing major transitions as well as commercial enterprises.

Figure E. Average Cost of Separations

Agency/Enterprise	Average Total Cost for Separations
DOE	
• Defense Site	\$18,393
• Non-Defense Site	\$11,963
DOD Restructuring	\$21,143
Commercial Enterprises	\$40,000 – 70,000

The DOE average cost for voluntary and involuntary separations compares favorably to the benchmarks. The average total cost for separations at DOE non-defense sites is lower than for defense sites, a difference which appears to be attributable primarily to differences in employee seniority and pay scale. The DOD² data source does not provide a clear delineation between the average cost for voluntary and involuntary separations. As such, the comparison with DOE is approximate. The data for commercial enterprises is highly variable with a range of \$40,000 – 70,000 for typical voluntary worker separations.

ES-7 Future Transitions Activities

After five years of significant work force and community transition, DOE continues to face major transition issues:

- Current plans call for DOE to exit from three major sites (Fernald, Mound, and Rocky Flats) with employment of approximately 6,139 within a five to ten-year period. (The annual running rate of operating expenditures at these sites exceeds \$1 billion. Thus, each year, this set of sites can be transitioned earlier saves approximately \$1 billion).

² DCAA Audit of DOD Defense Restructuring Program.

- Restructuring of the DOE work force towards “new ways of doing business” continues, with outsourcing and privatization initiatives ongoing (e.g., Portsmouth and Paducah).
- Integration of facility closure and transition activities with accelerated environmental remediation projects demands good work force planning and qualified workers.
- Facility closures require continuing community assistance to plan for the impacts of work force restructuring and to implement mitigating economic development strategies.

ES-8 Summary Conclusion

The Section 3161 Program, as administered by the OWCT, has had a positive impact on mitigating the social and economic impacts of the DOE transition by helping to develop and create more than 22,000 jobs, providing a foundation for community economic development, and providing leadership for site closure.

Chapter 1

Introduction, Scope and Methodology

Booz-Allen & Hamilton was tasked by the Department of Energy's (DOE's) Office of Worker and Community Transition (OWCT) to conduct an independent program assessment of the effects of work force restructuring programs conducted pursuant to Section 3161 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 1993. This chapter provides background and summarizes the scope and methodology for this study.

1.1 Background

The end of the cold war directly lead to a reduced need for the development and production of nuclear weapons as well as a major shift in the mission of DOE from one of primarily developing nuclear weapons to a more balanced focus on weapons research, environmental cleanup, and energy management. The reduction in the nuclear weapons mission also resulted in declining budgets and reduced employment. At the end of the cold war in the early 1990's, the DOE on-site management contractor team work force at defense sites exceeded 148,000, most of whom were primarily involved in defense and weapons programs. At the end of FY 1997, employment had declined to 105,000, almost one third of whom were involved in environmental management activities.

Recognizing the potentially large social disruptions of the shifting DOE mission, the Congress passed and the President signed Section 3161 of the NDAA. Section 3161 requires the Secretary of Energy to develop a plan for restructuring the work force at defense nuclear facilities that takes into account the reconfiguration of the defense nuclear facility and the plan for the nuclear weapons stockpile.

The Act indicates that work force restructuring plans are to be developed in consultation with local, state, and national stakeholders, the Secretary of Labor, appropriate representatives of local and national collective-bargaining units of individuals employed at DOE defense nuclear facilities, appropriate representatives of departments and agencies of state and local governments, appropriate representatives of state and local institutions of higher education, and appropriate representatives of community groups in communities affected by the restructuring plan. The plans are to be submitted to Congress within 90 days after notice of a planned work force restructuring has been given to the affected employees. Work force restructuring plans are required to be updated annually and include an evaluation of the implementation of the plan during the preceding year.

Section 3161 of the Act provides specific objectives to guide the plan preparation. The plan should minimize social and economic impacts. The plan should provide at least 120 days notice to employees and communities prior to commencement of work force restructuring. Reductions should be accomplished, when possible, through use of retraining, early retirement, attrition, and other options that minimize layoffs. To the extent practicable, the Department should offer a hiring preference to involuntarily separated employees.³ Employees should, to the extent

³ This is consistent with Section 3152 of NDAA for FY 1990 and FY 1991.

practicable, be retrained for work in environmental restoration and waste management. Employees transferred to other Department facilities should receive relocation assistance. Terminated employees should be assisted in obtaining reemployment assistance, including outplacement services, and appropriate retraining and education opportunities. The Department should provide local impact assistance to communities affected by the restructuring plan and coordinate these with the Department of Labor, Department of Commerce, and the Department of Defense Economic Adjustment Programs.

DOE responded to these requirements by establishing a task force in 1993 to coordinate worker and community transition assistance.⁴ In 1994, this Task Force evolved into OWCT whose mission was to coordinate Section 3161 activities nationally across all sites and programs. The principal functions of the Office are to: (1) establish policy and provide funding for contractor work force restructuring activities; (2) develop policy for contractor labor relationships, oversee the collective bargaining process, and assist the Department's field organizations in labor/management relations; (3) establish policy for community transition and allocate funding to mitigate economic impacts; (4) assist field organizations in reducing the operating costs associated with maintaining the Department's extensive assist infrastructure; and (5) provide information and appropriate opportunities for participation in the decision-making process affecting the contractor work force and adjacent communities.

OWCT provides national leadership, and establishes policy for work force restructuring activities and community transition. Work force restructuring plans are developed by DOE field personnel with input from affected stakeholders and from employers of the affected workers. The plans are approved by the Secretary of Energy.

DOE field office personnel manage the work force restructuring programs and are also responsible for the day-to-day administration of the community transition programs. Community transition programs are generally conducted by Community Reuse Organizations (CROs) or their designees. They may also be conducted directly by other parties as appropriate, such as training or educational institution and by the site contractor. CROs are frequently formed by the local community to be the focus for addressing economic impacts, soliciting and accepting participation by a cross section of public and private interests, and soliciting public input into the formulation of a community transition plan. Community transition plans are approved by the Secretaries of Energy and Commerce as required by the law. Training conducted under community transition plans is approved also by the Secretary of Labor.

1.2 Scope

The scope and objectives of this study are defined in Section 3153 of NDAA for FY 1998 which states; "The Secretary of Energy shall conduct a study on the effects of work force restructuring plans for defense nuclear facilities developed pursuant to Section 3161 of the National Defense Authorization Act for FY 1993... The study shall cover the four-year period preceding the date of this act and shall include the following:

⁴ "Establishment of a Task Force on Worker and Community Transition," Memorandum for Headquarters Elements, DOE, Hazel O'Leary, April 21, 1993.

- 1) An analysis of number of jobs created by any employee retraining, education, and reemployment assistance provided in each work force restructuring plan,...
- 2) An analysis of other benefits provided pursuant to such plans, including any assistance provided to community reuse organizations.
- 3) A description of the funds expended, and the funds obligated but not expended...
- 4) A description of the criteria used since October 23, 1992 in providing assistance pursuant to such plans.
- 5) A comparison of any similar benefits provided—
 - A) Pursuant to such a plan to employees whose employment at the defense nuclear facility covered by the plan is terminated; and
 - B) To employees at (Department of Defense) facilities whose employment has been terminated as a result of cancellation, termination, or completion of contracts, with the Department of Defense....”

This scope guided the development of this report, which answers these specific requirements. The study also provides conclusions on the overall effect of the work force and community transition programs at the DOE sites.

1.3 Methodology

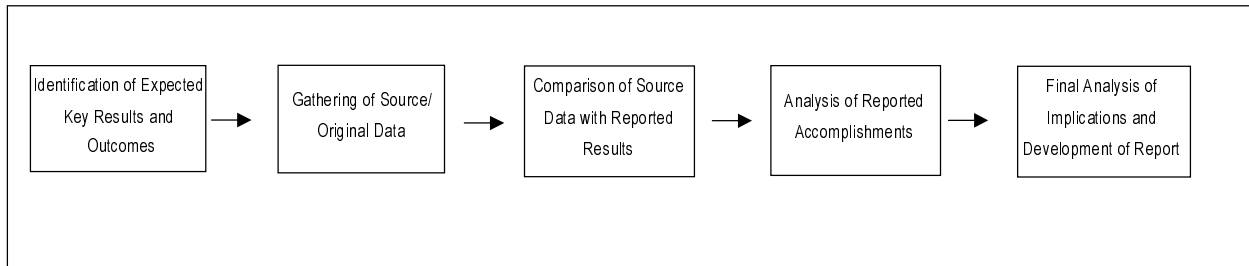
In order to verify and evaluate the reported accomplishments of the program, Booz·Allen developed a number of methodologies relying on collection and analysis of both reported and source data. The Booz·Allen study team collected and reviewed source data that served as the basis for the reported results and accomplishments. These data were collected in DOE field offices, through interviews with: DOE program and field personnel; personnel from other federal agency programs; DOE contractor personnel; and the human resources staff of commercial companies. Financial information was collected from OWCT, Environmental Management (EM), and Defense Programs (DP) personnel; DOE’s Financial Information System (FIS); DOE field office personnel; and grant recipients. Site visits were conducted at Oak Ridge, Mound, and Richland. Telephone interviews were conducted with all DOE sites participating in the program. A specific focus of the site visits and interview process was to collect data to verify the reported results regarding job creation/retention, employee separation benefits, economic diversification and related issues. Figure 1-1, below summarizes the sources of data used to complete this study.

Figure 1-1. Sources of Data

Analytical Area	Sources of Data
Number of Jobs Created <ul style="list-style-type: none"> - Retraining - Education - Community Economic Development 	OWCT quarterly and annual reports, interviews with field office and CRO personnel, and research reports
Other Benefits Provided	Research reports, OWCT annual reports, and interviews with field office and CRO personnel
Funds: <ul style="list-style-type: none"> - Expended - Obligated 	OWCT annual reports, DOE FIS data, OWCT Congressional Quarterlies and Annuals, interviews with OWCT, EM, DP and Field office personnel
Guidance and Criteria Used	OWCT final, interim, and draft guidance, NDAA, DOE orders, DOE memorandum
Comparison of Similar Benefits <ul style="list-style-type: none"> - DOD - Private Sector 	OWCT reports, DOD report, EDA reports, interview with DOD and EDA personnel, research reports, news releases, interviews with commercial industry human resources personnel

The analysis and verification of the reported results and accomplishments was completed in two phases. The first phase was the direct comparison of reported data with the original source data from the field offices, grant recipients and official financial records. A second phase was an independent assessment of the effects reported by OWCT. The results of these analyses are presented as findings in this report. The methodology described here is shown in Figure 1-2.

Figure 1-2. Booz·Allen Study Methodology



The results of applying this methodology are presented in this report.

Chapter 2

Job Retention and Creation

A major focus of Section 3161 and the OWCT Program efforts has been to create jobs in those communities affected by the DOE transition. The need to create jobs is clear:

- As shown in Figure 2-1, below, the DOE transition has resulted in a net reduction of 42,449 jobs over the four-year period from Oct. 1, 1993 through Sept. 30, 1997. This is a reduction of 29%.
- The DOE site is the primary employer in its labor market for nine of the sites, and is one of the top 20 employers at five additional sites. In fact the DOE is the top employer in the state at two sites (Savannah River and Idaho).
- The unemployment rates in the affected communities were generally higher than the national average when NDAA was enacted in 1993, and to some extent higher-than-national average unemployment rates still persist today.

Figure 2-1. Summary of Site Employment Conditions

State	Site	Sept. 1997 Employment	Employment Reduction (‘93-‘97)	Employer Ranking* (1997)	Unemployment Rate (%)**				
					1993	1994	1995	1996	1997
CA	Lawrence Livermore	6,403	1,916	Top 20	6.6	6.1	5.8	5.0	4.4
CO	Rocky Flats	3,410	4,281	Top 20 (Estimate)	4.5	3.7	4.1	3.8	2.8
FL	Pinellas	5	1,248	Top 100 (Estimate)	6.0	5.0	4.1	3.7	3.4
ID	Idaho	5,868	1,945	1	4.4	4.3	4.3	4.1	3.9
IL	Argonne	3,809	583						
KY	Paducah	N/A	14	1	4.5	5.2	4.2	4.3	5.3
MO	Kansas City	3,679	1,205	12	5.2	4.7	4.3	4.1	3.7
NM	Carlsbad	636	139	1 Top 5	1.3	1.2	2.0	3.1	1.7
	Los Alamos	6,687	892		7.0	4.4	4.0	5.4	4.3
	Sandia	7,576	1,558						
NV	Nevada	2,345	4,129	1	7.3	6.1	5.4	5.3	4.0
NY	Brookhaven	3,073	671						
OH	Portsmouth	N/A	193	1	13.0	11.0	8.8	9.1	9.1
	Mound	740	1,011	Top 20	5.4	4.8	4.0	4.4	4.0
	Fernald	1,989	1,007	Top 50 (Estimate)	6.6	5.3	4.0	4.1	3.5
SC	Savannah River	13,231	6,870	1	8.1	6.4	7.2	7.1	6.0
TN	Oak Ridge	14,046	3,630	1	5.7	4.4	5.8	5.3	7.3
TX	Pantex	2,920	407	1	3.8	3.4	3.7	4.3	4.5
WA	Richland	11,137	7,536	1	7.0	5.2	7.5	8.4	6.6
Other Sites		17,550	3,214						
		105,104	42,449	National Avg.	6.9	6.1	5.6	5.4	4.9

* Based on the county that the site is located in, the actual impact area is much larger than a single county. Information sources include local Chamber of Commerce, DOE field offices and CROs.

** Source: Bureau of Labor Statistics, 1998

The worker and community transition programs' effort to "create" or retain jobs takes two forms:

- The Worker Transition Program works to "retain" workers in new or restructured jobs at the DOE site or at other sites within the DOE complex. Assistance offered includes retraining, internal placements, and relocation assistance. External jobs are "created" for DOE employees by training, education, and outplacement of separated workers.
- The Community Transition Program works to create jobs by diversifying the economy and is designed to encourage economic development. The program works to retain jobs through business technical assistance and work force training efforts. Jobs are created from providing incubators, venture capital, regional marketing, and other programs.

Both approaches are appropriate for reducing the social and economic impacts on the community, and OWCT has worked with all the sites to create jobs thus lessening the social and economic impact of DOE site transitions.

OWCT's successes in job retention and creation are reported in the Annual Report to Congress. OWCT gathers information on work force restructuring programs annually through reports from the field offices. Community transition program information is gathered quarterly. The quarterly reports are prepared by the field offices in conjunction with information from grant fund recipients such as CROs.

We reviewed OWCT's reported job creation/retention data as stated in the annual Reports to Congress and Congressional Questions and Answers (Qs&As). The reported information was compared with information provided directly by the DOE field offices to OWCT in annual reports and quarterly reports. Independently we conducted a survey of the Field Offices and the CROs to collect data on business development, funding, and job creation. We also visited three field offices to examine their outplacement, training, business incubator, and other related activities. During the site visits, we interviewed a number of business owners that have been supported by various elements of these programs. Information for estimating jobs created and retained was also obtained by on-site and telephone interviews with CRO personnel. Data provided from these sources enabled us to check estimates of job retention, creation, and projections. The results of our analyses are presented below

2.1 Worker Transition Job Retention and Creation

The work force restructuring program retains or "creates" new jobs using these methods:

- Internal placement through worker retraining if necessary
- Transfer, relocation and preference in hiring for workers among sites
- Outplacement assistance
- Severed worker retraining and education

The sections below discuss the estimated number of jobs retained or created by OWCT program in each of these areas.

2.1.1 Internal Placement and Worker Retraining Effects

The number of voluntary and involuntary reductions at DOE sites was decreased by about 19 percent as a result of successful internal placement of workers. Internal placement also helped reduce the potentially negative publicity that would have arisen from simultaneously hiring several thousand workers to complete new missions such as environmental and hazardous waste management while reducing the overall work force by more than 42,000 workers. Internal placements from 1993 to 1997 accounted for 8,286 workers retaining employment as shown in Figure 2-2.

Figure 2-2. Job Placement Results

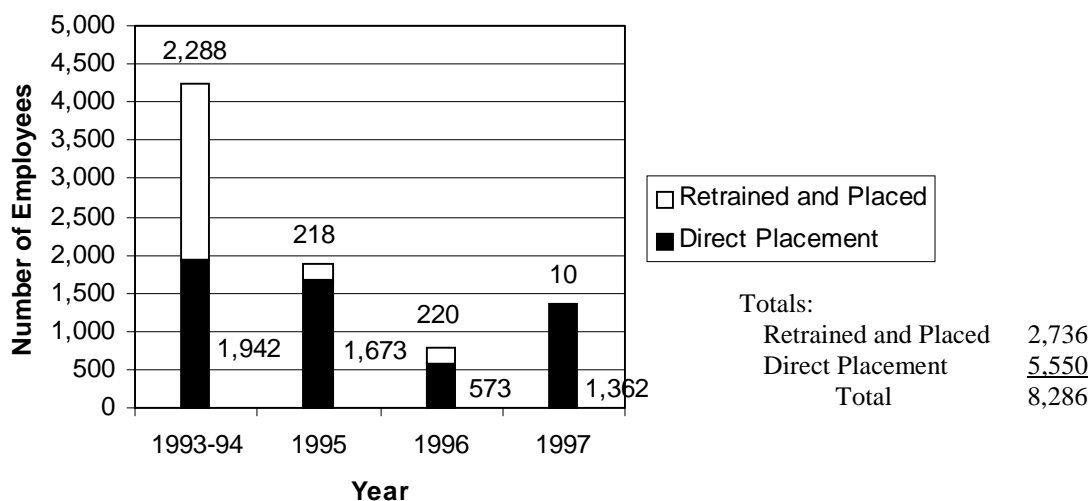


Figure 2-2 indicates that the majority of internally placed workers, (5,550), were placed directly without retraining. Retraining of workers for missions such as environmental and hazardous waste management resulted in the retention of an additional 2,736 contractor employees. The majority of these retraining efforts occurred early in the OWCT program. Consequently, almost 8,300 displaced workers benefited from the OWCT guidance on internal placement in mission critical programs.

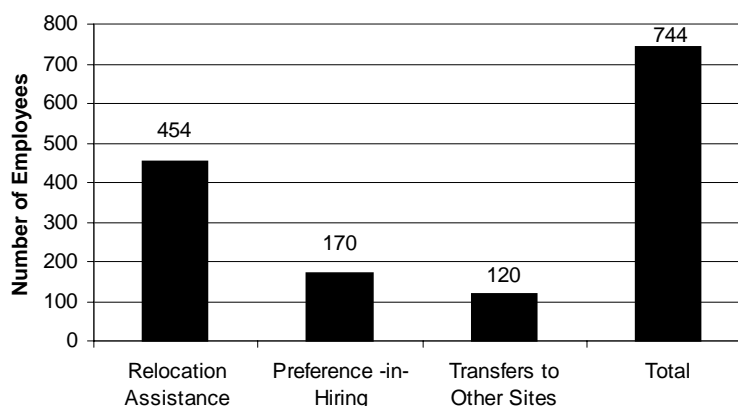
The number of participants in the job retention program declined in FY 1995 and 1996 and increased by 73 percent in FY 1997. The number of direct placements has increased as a percentage of total job retention in each fiscal year.

2.1.2 Transfers, Relocation, and Preference-in-Hiring Effects

If internal placement and retraining could not fill openings with appropriate personnel in the needed time frames, DOE encouraged its contractors to consider previously separated or separating workers from other DOE sites. Consistent with Section 3161, guidance provided by

OWCT to field offices and contractors recommended that previously separated defense nuclear workers receive job hiring preference for open positions. The guidance also recommended that relocation assistance be offered to separated prime contractor employees at other DOE sites where open positions existed. OWCT also supported the creation of the Job Opportunity Bulletin Board System (JOBBS); an electronic system to announce vacancies and to allow employees to post resumes for review by contractors and programs. As shown in Figure 2-3 below, these benefits were utilized 744 times by employees looking to be placed in a job at another site.

Figure 2-3. Relocation, Transfers, and Preference-in-Hiring 1994-1997

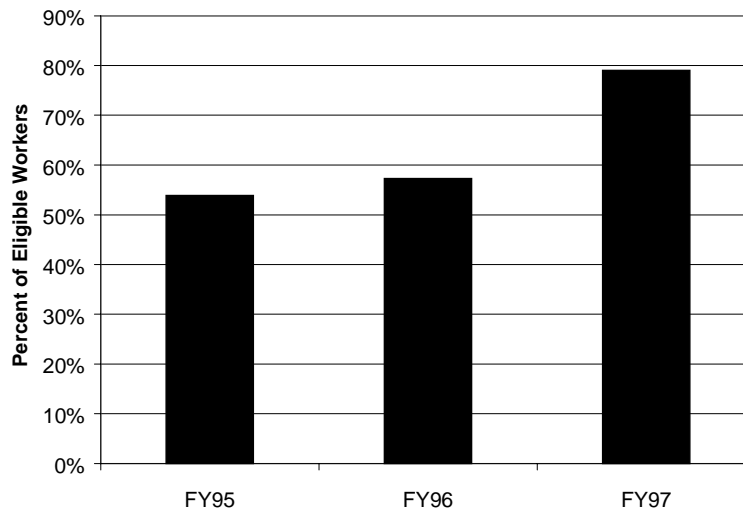


It was not possible to determine if these 744 users represent individuals or includes any double-counting. Some employees may have received one, two, or three of these benefits. Also, the number of relocations of personnel may be undercounted, since only those needing relocation assistance were counted. Some contractors are likely to have paid for relocation, and this benefit would therefore not have been reported. Nevertheless, a minimum of 170 jobs were retained, which is the number of workers rehired.

2.1.3 Outplacement Services

Outplacement services offered by each site vary, but often includes job listings, skills assessments, resource libraries, clerical help, job fairs and resume distribution. Outplacement centers are frequently staffed with job counselors and state employment assistance personnel. For these reasons, outplacement services were one of the most frequently used benefit by voluntarily and involuntarily separated workers. Figure 2-4 shows the trend in outplacement services for separated workers.

Figure 2-4. Utilization of Outplacement Services by Separated Workers



As shown, the percent of separated workers using these services has grown significantly during the last three years from 50 percent to nearly 80 percent.

OWCT measured the results of outplacement services through their Displaced Worker Questionnaire. A highlight of the results includes that for Fiscal Year 1995, 831 (67%) of the respondents that used outplacement found the service helpful. For Fiscal Year 1996, 72% of those who used outplacement reported that they were satisfied with the service they received. Outplacement was also cost effective with an average cost of \$640 per employee who used it. For DOE sites without outplacement services, OWCT offered the services of a National firm to support outplacement needs at individual sites.

Due to the lack of data regarding job placement and the number of other factors that affect job placements, no national estimates were made for its effectiveness in job placements. Despite this lack of national data, our on-site interviews and data collection efforts did confirm that outplacement services are viewed positively. For example, in FY 1997 the Oak Ridge Career Services Center was used by about 1,300 former contractor employees. The Center offered about 100 workshops and 50 brown bag meetings. Combined attendance exceeded 2,000. As part of its services, the Center uses a job-lead developer. The developer identified approximately 200-300 job leads each week, for a total of more than 11,000 during the year.

2.1.4 Separated Worker Retraining and Education

Voluntarily and involuntarily separated employees were often eligible to receive financial assistance of up to \$10,000 per employee over a two-year period for training. This assistance could be used for training, to receive certifications, associate and bachelor degrees, or advanced degrees. OWCT receives information annually on the number of employees that took advantage of this benefit. This number includes employees that may have used the benefits in previous years. During the 1993 to 1997 study period, this benefit was used 9,955 times. Since the benefit was generally available for a two-year period, a minimum of half or 4,978 employees is likely to have used the program. Although OWCT does not receive information on graduation

rates or successful follow-on job searches, some standard assumptions can be made. The first is that approximately 60 percent of the employees completed certification or degree programs.⁵ The second is that at least 80 percent of the graduates found jobs at least partially based on their education.⁶ This approach results in an estimate that 2,389 former employees located new jobs at least based in part on their education benefits.

The Columbia Basin College Work Force Training Facility (pictured below) provides an example of how DOE and local colleges and other organizations are working to provide educational opportunities to develop the skills for separated employees to secure new jobs. The recently completed facility is a 36,000 square foot single story building which houses four state-of-the-art computer labs, eleven fully equipped classrooms, a 400 person assembly hall and a modern satellite telecommunications center. Building construction cost an estimated \$5 million. Columbia Basin College campus in Pasco received \$1.2 million in funds and equipment from DOE. The facility is open to students pursuing degrees or continued learning. Customized training programs, professional development and business planning services are available through the facility as well. Within the facility, the Worker Training/Retraining Program operates under a grant to the Benton Franklin One Stop Partnership and has retrained approximately 2,000 current and displaced Hanford site workers to date. Displaced DOE workers can apply their training benefits to courses offered by the facility.



Columbia Basin College

⁵ Based on *The Condition of Education 1998*, National Center for Education Statistics, Washington, DC 1998 which indicated national averages for completion of two year degrees as 37 percent and four year degrees as 57 percent. Other examples include from the Independent Colleges and Universities of South Carolina a range of 53-61 percent graduation from four-year schools. The State of Maryland reports in its 1998 Data Book that Career School graduation rates are 64 percent. Since most of the employees are taking certificate courses, we assumed a rate of 60 percent is conservative for graduation rates.

⁶ This is based on program goals of 74 to 80 percent for training programs conducted by the Department of Commerce (DOC) and DOD for displaced defense workers.

2.1.5 Worker Transition Summary Results

Figure 2-5 below, summarizes the estimated number of jobs created and retained as a result of the work force restructuring programs conducted across the DOE sites.

Figure 2-5. Worker Transition Jobs Created and Retained

State	Site	Internal Placement		Transfers, Relocation and Hiring Preference	Severed Workers Retraining and Education	Total
		Without Training	With Training			
CA	Lawrence Livermore	0	0	N/A	21	21
CO	Rocky Flats	1069	1528	N/A	420	3,017
FL	Pinellas	0	0	N/A	347	347
ID	Idaho	86	90	N/A	200	376
IL	Argonne	35	0	N/A	0	35
MO	Kansas City	0	0	N/A	200	200
NM	Los Alamos	15	2	N/A	78	95
	Sandia	108	0	N/A	23	131
	Ross Aviation	13	0	N/A	3	16
NV	Nevada	106	191	N/A	549	846
NY	Brookhaven	23	0	N/A	0	23
OH	Fernald	0	0	N/A	33	33
	Mound	233	0	N/A	272	505
	Portsmouth	0	0	N/A	3	3
SC	Savannah River	2,121	634	N/A	72	2,827
TN	Oak Ridge	873	291	N/A	25	1189
TX	Pantex	80	0	N/A	5	85
WA	Richland	788	0	N/A	138	926
Total		5,550	2,736	170	2,389	10,845

N/A: Not Available

As shown, a total of 10,845 jobs were estimated to have been created or retained as a result of the program's efforts

2.2 Community Transition Job Creation and Retention

The community transition program, as a formal activity, was initiated in 1993, with most job and business development activities starting in 1994 or later. Initial funding was generally provided to complete planning grants to determine the need for community transition funds and the potential uses of those funds. Communities affected by work force reductions were encouraged to establish CROs.

CROs serve to implement community transition activities. They coordinate local community transition planning efforts and include a broad representation of affected communities. CROs develop and submit community transition plans to DOE field offices, receive funding from DOE and participate in the management of community transition projects.

Communities that are impacted by work force restructuring may apply for funds to conduct activities such as those considered in the planning phase reports. Proposals that include training

are also approved by the Secretary of Labor. Proposals are submitted to the field offices with approvals necessary from DOE Headquarters and more recently, from the Economic Development Administration (EDA). Proposals are generally developed by CRO's, however, proposals have also been accepted from local communities, education institutions, other non-governmental organizations, and site contractors. These include business incubators, technology centers, loan programs, support to regional or county development offices, and other similar organizations. Through the end of FY 1997, 11 communities had applied for and received community transition assistance. Other communities are in the process of applying for planning funds (e.g., Albuquerque and Fernald), and several communities have decided that funds are not needed at this time (e.g., Oakland).

The field offices are required to report quarterly on the status of OWCT community transition funds and on a number of performance measures. The field offices in turn require CROs and other recipients of community transition funds to report quarterly. The key performance measures reported include an estimate of jobs created and retained and businesses supported or created. During the site visits and telephone surveys, it was apparent that the CROs coordinate most of the collection of information prior to submittal to the DOE field offices. The CROs collect this information directly from programs that they manage and from programs managed by other entities. In some cases, CROs are able to collect the information directly from the businesses that received support from DOE programs. The CROs then make a concerted effort at screening out or apportioning job creation efforts between other contributing factors such as other regional work force development grants or benefits programs.

We reviewed the job creation and retention counting methodology with the CROs at the sites we visited. From our telephone surveys we also discussed in-depth methodologies used at several other sites for determining job retention and creation. We also surveyed each of the CROs and sites to confirm their estimates of job creation and retention.

As a confirmatory step, we examined in detail the information regarding business creation and support. We viewed these two indicators as the most important indicators of the long-term impacts of the program because businesses create jobs and diversify the regional economy. Verification of reported business starts and diversification would likely be an indicator of significant long-term positive impacts on job creation and retention.

2.2.1 Community Transition Program Jobs Created and Retained

OWCT job creation and retention estimates are based on jobs created directly from community development and business starts. Figure 2-6 shows the results of our survey of job creation. The survey indicated that actual job development had grown steadily from 2,261 at the end of FY 1995 to 6,418 by the end of FY 1997. The total jobs created and retained by community transition programs through the end of FY 1997 was 11,503. As many of the DOE sponsored community development projects are not yet complete, continued growth in job development can be expected as the projects mature.⁷

⁷ Past analyses of public works job development programs has indicated that the success of job development activities cannot be fully measured for six years or more following completion of the project. This is because significant continued job development is frequently experienced after projects are completed and allowed to mature.

Figure 2-6. Community Transition Job Creation Results

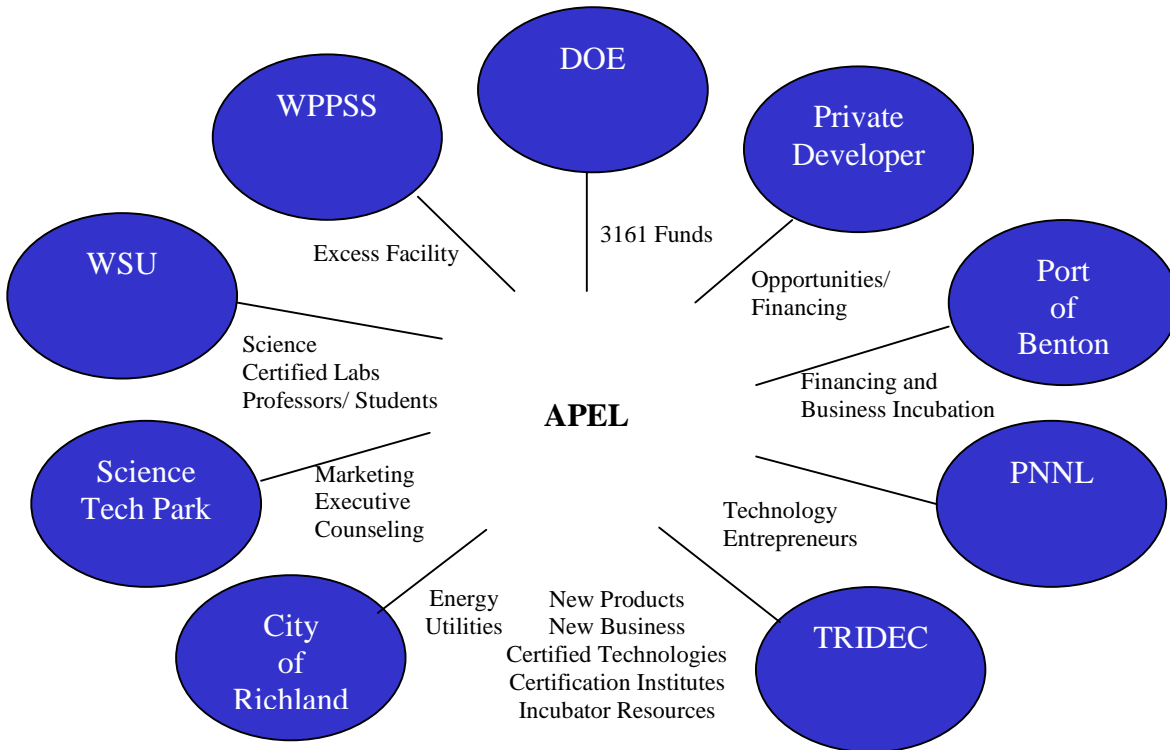
State	Site	Estimated Jobs Created			Total
		1995	1996*	1997**	
CO	RFETS	222	343	626	1,191
FL	Pinellas	388	179	756	1,323
ID	INNEL	0	352	322	674
NM	LANL	0	0	570	570
NV	NTS	0	0	1,645	1,645
OH	Mound	0	221	39	260
	Portsmouth	0	0	60	60
SC	SRS	0	531	1,586	2,117
TN	Oak Ridge	1,605	1,068	228	2,901
WA	Hanford	46	130	586	762
		2,261	2,824	6,418	11,503

* Based on Annual Report on Contractor Work Force Restructuring, US DOE, FY 95-96

** Based on telephone survey of Field Offices, CROs, and quarterly report submittals

One example of the job creation programs operated by local community organizations is the Applied Process Engineering Laboratory (APEL) project in Richland Washington. APEL is being developed through the combined efforts of the Washington Public Power Supply System (WPPSS), the Port of Benton Authority, Pacific Northwest National Labs (PNNL) and Tri-City Industrial Development Council (TRIDEC). APEL is located in a former warehouse facility of WPPSS. The building was provided for this laboratory as leveraged funds (in-kind) under a WPPSS lease/purchase agreement and is valued at \$2.8M. The facility is managed and operated by the Port of Benton. The laboratory provides a unique opportunity for small companies seeking a Resource Conservation and Recovery Act (RCRA) permitted hazardous materials facility for research and development. The anchor tenant in this facility is PNNL, which can provide limited technical assistance to local businesses without charge under a TRIDEC grant. One of the small businesses in the facility is comprised of PNNL employees on entrepreneurial leave of absence funded under the OWCT Work Force Restructuring Program. TRIDEC has provided \$3.5M to the Port of Benton for the development of this laboratory. This money has been expended by the Port of Benton to renovate the facility and support initial operations. In addition, the Port of Benton has issued a \$1.5M bond to support the development of APEL.

The illustration below depicts the institutions with involvement in the development of APEL and the capabilities they bring to the project.



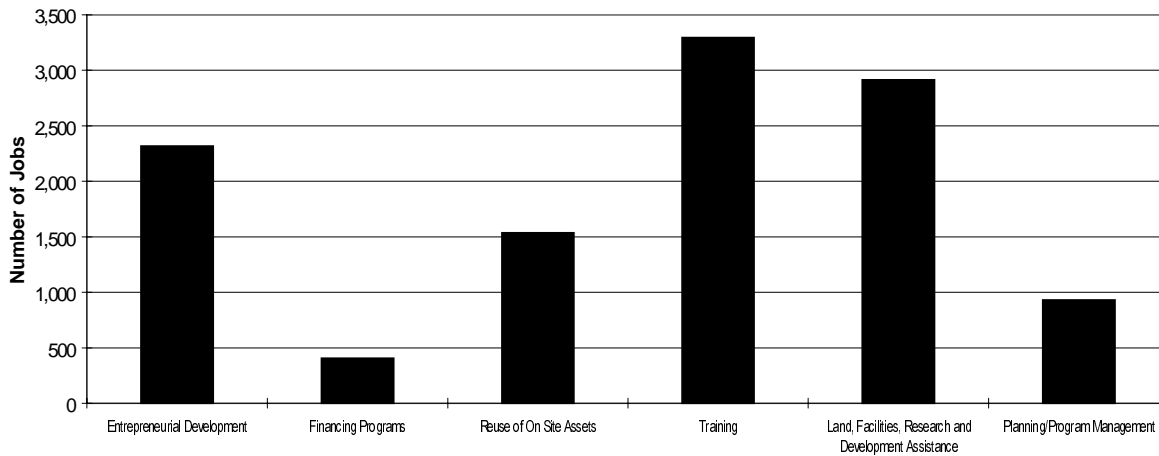
The facility is an example of community cooperation in establishing a new technology facility. The Port of Benton is projecting 30 new jobs created/retained by the APEL facility in FY 1998 and 90 new jobs in FY 1999. This number maybe low, as it appears to count individual employees directly employed by the facility. There will be additional vendor and facility support jobs created to supply and maintain the facility as it grows.

OWCT aggregates community job development programs into six program areas:

- Entrepreneurial Development
- Financing Programs
- Reuse of Site Assets
- Training
- Land, Facilities, Research, and Development Assistance
- Planning/Program Management

Figures 2-7 depicts the number of jobs created by each of these community transition activities.

Figure 2-7. Jobs Created/Retained by Community Support Program Area



Training and development assistance created the most significant job creation and retention impacts.

2.2.2 Business Development and Expansions

As a secondary means for validating job creation information, we collected information from the CROs identifying each business that was created or supported by the DOE programs. We sampled this information because companies can be more easily identified and counted than individual employees and certain business information is publicly available. Figure 2-9 shows a summary of the results. Appendix A contains descriptions of representative companies at each of the sites.

As shown in Figure 2-9, we estimate that 246 businesses have been created at least partially as a result of the community transition programs. Interviews with selected business owners indicated that many of these businesses startups would not have been attempted without the support of the DOE community transition programs.

Figure 2-9. Number of Business Supported by Community Transition

State	Site	Number of Businesses Created	Number of Businesses Supported	On-site Leases
CO	Rocky Flats	0	375	0
NM	Los Alamos	1	0	0
FL	Pinellas	74	139	3
ID	INEEL	40	52	0
NV	Nevada	4	35	0
OH	Mound	19	0	18
	Portsmouth	0	0	0
SC	SRS	6	22	0
TN	Oak Ridge	26	112	8
WA	Richland	76	263	15
Totals		246	998	44

Three examples of small business expansions and startups at DOE sites demonstrate how the community transition program works to increase economic diversity, expand employment opportunities, and encourage facility reuse.

- Credit Card Solutions, Inc. in Richland, Washington, was started by several former DOE employees. The company writes and sells software to automate credit card procurement purchases for large businesses and organizations such as hospitals, schools, and local large businesses. During the startup phase, the employees were on entrepreneurial leave from the DOE laboratory, and the company used business advisory services provided through the community development programs. Since its founding, growth of the company has required it to move into larger facilities twice.
- The Livingston Rail Company, located in Livingston, Montana, is expanding its business and locating a new rolling stock maintenance facility in the Richland 1100 area. This project is part of a broader initiative to establish a regional inter-modal transfer and switching facility for the Northwest. Initial job estimates are for about 15 new hires. Due to planned growth of this facility, the local technical college is developing, in conjunction with Livingston Rail Company, a new technical training program on rail and rolling stock maintenance and repair. Additional jobs are expected to accrue from indirect and induced job effects in providing supply, logistical and other vendor services to the emerging facility.
- When Thaler Machine Company needed a new location to house its new product line of machined parts, the Mound plant was determined to be the location of choice. The Thaler plant manager was familiar with the Mound facility, skill levels of contractor personnel that were being severed, and the extremely high precision equipment available for leasing. Since locating their new plant on-site at Mound, Thaler has more than doubled their employment levels, and leased a number of high precision fabrication equipment. Due to their continued success in working with Miamisburg Mound Community Improvement Corporation (MMCIC) and the Mound plant management, Thaler has chosen to pay for a number of facility upgrades to the HVAC and electrical systems along with painting, and installation of new internal walls. As part of their

business operations they have also continued to upgrade and maintain the leased equipment in optimum operating condition.

We also found that several medium size to large businesses had elected to expand to DOE sites or local communities. Examples of this include Bridgestone/Firestone Tire Company at Savannah River and Raytheon at Pinellas. Each of these companies chose DOE sites or vicinities because of the skilled work force and availability of physical resources such as land, buildings, and machining equipment for lease or purchase. These companies will bring more than 400 jobs to each of these local communities.

2.3 Total Job Creation and Retention

Figure 2-10 below summarizes the total job creation and retention to date from the various worker transition and community transition programs.

Figure 2-10. Job Creation and Retention Results

Program	Jobs Created or Retained Through FY 1997*
Worker Transition Program – Total	10,845
• Internal Placement of Workers	8,286
• Transfers, Relocation, and Hiring Preference	170
• Outplacement	Not Estimated
• Severed Worker Retraining and Education	2,389
Community Transition Programs	11,503
Total	22,348

* Indirect job creation is in addition to these estimates.

As shown, Booz-Allen estimates that the work force restructuring and community transition programs have created or helped retain more than 22,000 jobs from FY 1993 through FY 1997.

2.4 Findings

Booz-Allen estimates 22,348 jobs have been created or retained as a result of the work force restructuring and community transition programs. The work force restructuring programs resulted in retention or creation of an estimated 10,845 jobs. Of this estimate 8,286 represent jobs retained by employees to fulfill critical mission requirements and 2,389 represent jobs obtained by DOE workers separated from DOE contractors. Community Transition Programs appear to have created approximately 11,503 jobs.

Thus, indications are that the OWCT has had a large impact on lessening adverse impact on affected communication. The 22,000+ jobs is approximately 60 percent of the non-retirement separations from DOE facilities.

Chapter 3

Other Benefits and Effects from Worker and Community Transition Programs

Job creation and retention is only one of the effects of the programs conducted in accordance with Section 3161 of the NDAA for FY 1993. Other effects include accelerating site closures, promoting facility reuse, promoting a skilled and productive labor force, and minimizing workplace and legal liabilities. In this chapter, we examine the results of OWCT activities related to these other benefits. To accomplish this, we reviewed OWCT annual reports to determine the key results and accomplishments. We then compared and attempted to verify this data with information collected directly from the field offices, DOE contractors, other federal agencies, and commercial enterprises.

3.1 Accelerated Site Closure and Transfer

OWCT worked closely with DOE-EM and the local communities to facilitate efforts to transfer certain excess facilities to local communities. Two site transfers are well along:

- Mound, Ohio
- Pinellas, Florida

The OWCT has been a major facilitator in accelerating these transfers as described below.

3.1.1 Mound, Ohio

The Mound Plant comprises approximately 300 acres. From 1948 to 1995, a variety of nuclear materials and weapons parts were produced onsite. Beginning in 1994 production was transferred to other sites and resources were directed towards cleanup of the site.

Acceptance of the industrial use standard for cleanup levels by the community is estimated to reduce the cost of cleanup at Mound by approximately \$1 billion when compared to residential standard for cleanup. To facilitate conversion to private sector industrial use, DOE and MMCIC signed an agreement to transfer the site on January 26, 1998. The site transfer will be completed following completion of certain environmental remediation efforts and documentation of completion of cleanup of certain areas. The EM Project Baseline Summaries for the Mound Landlord and Site Services program estimated costs at \$120 million from 1999 through 2002. Following the transfer, many of these costs will no longer be necessary, or they will be assumed by MMCIC. MMCIC estimates that the facility will need \$48 million in site improvements, of which \$15 million is anticipated in the form of matching grants from OWCT.

OWCT supported the transfer process through various inducements to make industrial reuse a viable and desired option and encouraging accelerated transfer of the site to MMCIC. The case study following this page presents in greater detail the story of the Mound transition and OWCT's role in it.

Case Study 1

Mound Advanced Technology Center – An Early Site Closure

The Miamisburg Mound Community Improvement Corporation (MMCIC) is currently assisting the DOE to divest the Mound site, and ensure the viable reuse of the site consistent with the industrial cleanup standard that has been established. In conjunction with the site's regulators, DOE and MMCIC are working toward the integration of DOE's plan for Accelerated Cleanup Focus (2006) and the Mound Comprehensive Reuse Plan developed by the community. The establishment of strategies to achieve industrial reuse, coupled with cost effective approaches to facilities transition has led to the sale of the Mound site to the City of Miamisburg on January 23, 1998.

Strategy for Facility Reuse

The planned facility reuse of the Mound site is a significant and compelling project for the DOE and the Miamisburg community. It represents an important undertaking to revitalize an aging defense nuclear facility for the purpose of creating jobs and business opportunities in the Dayton metropolitan area. The reuse strategy reaches beyond economic diversification and outside the fence community development activities to



leverage the best resources of the Mound facility and the capabilities of its former employees. The Mound Facility Reuse strategy is a DOE benchmark for brownfield and facility revitalization projects and dependent upon DOE funding for its success.

The objectives of the Reuse Plan are:

- Achieve an acceptable and viable reuse of the site in support of the community who has accepted the industrial use cleanup standard
- Achieve the industrial use cleanup standard in order to afford DOE significant cost savings
- Dispose the site in the most cost effective manner possible
- Exit the Mound site in a timely manner to support productive reuse of the site
- Transfer the site to the private sector and reduce the impact of closing the Mound site on the community
- Create a collaborative relationship between DOE, its regulators and stakeholders

The proposed Reuse Plan⁸ for the Mound Advanced Technology Center (MATC) is designed to create a contemporary research and industrial park. The proposed plan has five principal features:

- Clearance of selected buildings and structures including overhead steam lines and fencing.
- Reforestation to control erosion and improve storm water management
- Modification of site access and construction of a cross-site road
- Construction of new research and industrial development buildings
- Segmentation of site parcels around existing building clusters and new development

Regional Economic Data

The regional economic data are important indicators for judging the local need and the challenge of converting the Mound facility to private sector reuse. The Dayton MSA covers four counties in west central Ohio: Montgomery, Greene, Clark and Miami. The Mound facility is located within Montgomery County, which grew substantially faster between 1960 and 1970 (increasing by over 80,000). By 1980, population in the county had fallen by about 36,000. The decline was influenced by regional economic instability due to the relocation of major employers abroad in search of lower labor costs.

The 1990 census showed that Montgomery County contained roughly 70% (303,200 jobs) of the Dayton area employment and 60% (573,809) of the population. The 2015 forecasts generated by the Miami Valley Regional Planning Commission forecast employment growth for the county of approximately 16,000 jobs. Roughly half (8,400) of the projected jobs for the county are forecast in the Miami Township and City of Miamisburg which encapsulate the Mound site. This is due, in part, to the I-75/I-675 interchange near the Mound site which has emerged as a center of suburban office and retail development and will influence the attractiveness of the Mound site in the future.

Employment trends for the Dayton area provide insight into how the regional economy has changed. There is a period of economic recovery beginning in 1984 and continuing through 1990 when roughly 75,000 new jobs were created in the Dayton area. Job creation between 1990 and 1994 has slowed with about 6,800 jobs created. Government employment concentrated primarily at Wright-Patterson Air Force Base has had an overall stabilizing influence with about an 11% share of Dayton area employment between 1980 and 1994. Decisions to close or reduce staff at the Defense Electronics Supply Center and the Mound site in 1993 resulted in a loss of approximately 3,400 jobs.

It would be incorrect to assume that the local manufacturing base is in decline. The manufacturing sector lost about 1,800 jobs between 1992 and 1993, with a gradual recovery of almost 8,000 new jobs in the Dayton area between 1993 and 1995. The Dayton area economy remains volatile, subject to global economic conditions and the financial health of its major employers.

⁸ Miamisburg Mound Reuse Plan, Sasaki Associates, Inc., January 1997

Regional Facility-Space Absorption Factors

An important measure of the potential success in any facility reuse strategy is the space absorption factors for the region. According to local brokers, the majority of absorption has occurred in investment-grade industrial buildings. Industrial space at the Mound site is not considered investment-grade. Most private sector enterprises do not require the close tolerances, reliability and redundancy of the space and equipment at the Mound site. These “features” translate into higher operating costs without a comparable rate of return. Nonetheless, the Reuse plan indicates that the range of advanced testing and analysis equipment at the facility will have a considerable influence on the redevelopment potential of the site.⁹ Redevelopment of the site will also include development of vacant parcels. The Reuse Plan estimates that a minimum 20% (2.5 acres/year) of the land absorption for new industrial development in the South Dayton submarket can occur at the Mound site in the near-term. Currently, MMCIC indicates that the majority of Mound office space will not become available until 2005 when DOE is expected to vacate. Beyond 2000, realistic projection of market demand for Mound office space is problematic. In general, the Mound office space inventory suffers from generally inefficient floor plans with old administrative space built along single corridors with double-loaded office spaces.

Research and Development in Dayton

The Dayton metropolitan area has several concentrations of research and development activity including the 1,250 acre Miami Valley Research Park subsidized by a \$20 million grant and donation of 675 acres by the State of Ohio. The current developed space of 715,000 square feet has a vacancy rate of less than 4%. A second area of high-tech development has emerged around Wright State University. Several business parks have recently been developed in this area adjacent to Wright-Patterson Air Force Base.

Absorption of R&D space at the Mound site will be influenced by the status of activity at Wright-Patterson. The Reuse Plan would have the Mound site capture any additional R&D activities generated at Wright-Patterson.

Business Incubators

Currently, MMCIC is not a state-designated incubator. Nonetheless, the Mound facility has been an important incubator for small businesses. A participant in the Mound incubator has been selected in each of the last three years for the Ohio Small Business of the Year Award. In over 19 Mound employee-based business starts, not a single business has failed and several potential acquisition proposals exist.

The Dayton Department of Economic Development is planning to build a 60,000 square foot incubator on an old General Motors site known as the Edison Incubator. As of the writing of this report, the Mound incubator program will be deferred to the Ohio Edison Incubator. The City of Kettering may develop an additional incubator depending upon the demand for incubator space.

⁹ Miamisburg Mound Reuse Plan, pg. 24

Market Value and Potential

The Sasaki Associates, Inc. consulting team concluded that market potential exists for Mound site reuse as an industrial/R&D park. The plan assumes that roughly \$45million is invested to repair, renovate and upgrade facilities. Based on different methods for valuing the facility, the consulting team concluded the Mound facility would have a present value of approximately \$5 million after a renovation investment of \$45 million. In a typical business decision, a project like this would not be approved. The decision is balanced by the considerable savings by transitioning Mound to a brownfield industrial site (currently estimated at \$1 billion) and not returning the site to a greenfield closure site.

Near-Term Business Results

At the end of FY 1997, the MMCIC reported that 260 new jobs were created at an average cost of \$27,617 and 120 jobs filled by displaced DOE workers. These jobs are direct hires for enterprises located onsite and do not include the indirect or induced effect of additional jobs in the community.

OWCT assisted in the establishment of MMCIC as the single point of contact for coordinating future reuse of the facility. This approach helped to avoid fragmentation of competing interests in the community dialogue prior to the agreement between the City of Miamisburg and the DOE on January 26, 1998.

In turn, OWCT served as the DOE focal point for development, review and approval of documents needed for the Mound transfer. OWCT coordinated the waiver for full cost recovery of leased property and resolved issues related to payment of utility back charges. The office worked to obtain EDA's approval of the Mound Reuse Plan.

OWCT coordinated with DOE-EM to accelerate cleanup activities necessary to transfer the facility and release selected buildings to MMCIC ahead of schedule.

OWCT worked to provide over \$14.7 million in FY 1993 and 1995 funding to MMCIC and the City of Miamisburg. The planning to develop a transition plan would not have been possible without this funding. OWCT has committed to provide up to \$15 million to MMCIC over the next three fiscal years depending upon the availability of appropriations.

Findings

- The Mound site is dependent upon continued DOE program support to execute its \$48 million renovation program and maintain a viable facility transition schedule.
- The Mound site has demonstrated an ability to undertake critical facility transition planning and to affect a sale of the site (1/23/98) to the City of Miamisburg with the assistance of the Office of Worker and Community Transition.
- Dayton area job-growth projections are dependent, in part, upon the successful transition of the Mound site to the private sector.
- The reuse of the Mound facility appears to be assisting with early closure, resulting in savings to DOE of up to \$1 billion.

3.1.2 Pinellas, Florida

Another example of how accelerated transfer of the sites reduces DOE's and in particular, EM's future operating costs for landlord activities is the Pinellas site. The Pinellas Plant manufactured neutron generators and other components from 1957 to 1994. The site focused on environmental restoration since 1994. This site was transferred in September 1997 three years ahead of the target date. Before the transfer, the estimated costs to EM for landlord and operations activities were approximately \$63 million for FY 1998 through FY 2000.¹⁰ Following the transfer, EM is no longer responsible for the landlord and operations activities or costs.

The case study following this page presents in greater detail the story of the Pinellas transition and OWCT's role in it.

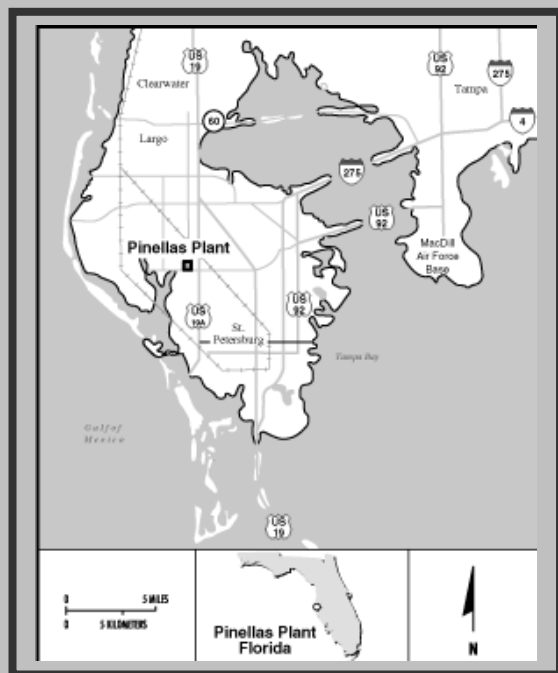
¹⁰ BEMR Appendix A, US DOE 1996.

Case Study 2

Pinellas – An Early Site Closure

The Pinellas Science, Technology & Research (STAR) Center (formerly the U.S. Department of Energy Pinellas Plant) is located on the west coast of Florida near St. Petersburg. (See map below). Pinellas represents a successful transfer of a surplus DOE nuclear weapons production facility to a private technology and business development facility. The effectiveness of the transfer can be measured in a number of areas, including; stakeholder involvement in the

transition process, development of new, marketable private sector products utilizing site facilities and resources, and the occupancy rate of the plant's buildings.



The Pinellas Plant, built in 1956 to support the DOD's nuclear weapons program, was primarily responsible for the design of electronic components for nuclear weapons and also developed advanced manufacturing technologies. At its peak, the Pinellas Plant employed over 2,000 workers.

In September 1994, the plant stopped producing weapons-related components and began the transition from a defense mission to environmental management. Equipment that could be utilized by future clients at the site was retained if the cost of relocating the equipment was not significantly less than purchasing new equipment at the other facilities.¹¹

Before transfer of the site, the buildings and grounds at Pinellas were successfully decontaminated under EM stewardship, with the exception of ongoing groundwater decontamination activities that are scheduled to run through 2020. However, the site has been cleared for industrial use while the remediation of groundwater in the Northeast parcel continues. The DOE presence at Pinellas is limited at this time to oversight of continued groundwater remediation.

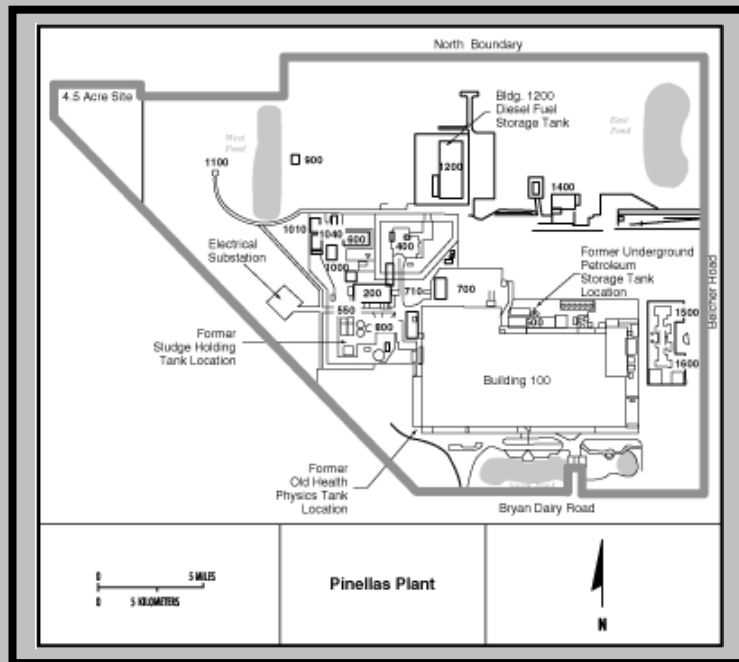
Site Transition

In response to DOE's decision to close the Pinellas Plant, representatives of the region's communities, local industries, and institutions formed the Tampa Bay Defense Transition Task Force in August 1993. The Task Force, comprised of government, community, and local business stakeholders developed the "Pinellas Plant Future Use Plan", dated December 21, 1993. The Task Force mirrored the DOE's stated goals for community stakeholder involvement with a broad range of members. The Task Force focused on the assets at the site, the composition of the regional economy, and leveraged the support available from DOE and other parties to navigate a path forward that effectively mitigates the impact of the Pinellas Plant closure. By modeling a

¹¹ Source: The 1996 Baseline Environmental Management Report.

number of alternative ownership and use scenarios for the site, the Task Force was able to successfully lobby for transfer of ownership, demonstrating the long-term benefits to the regional economy.

The stated goals of the site transition effort focus on three basic elements; 1) maintain core capabilities, 2) attract anchor tenants, and 3) support economic development initiatives. Through the active promotion of the facility by the Pinellas County Industry Council (PCIC), with the application of the technology resources in the TDC, the transition plan has largely met its goals.



Site Reuse

Transfer of ownership of the site to the PCIC was completed in 1997. PCIC, which has been involved in economic development in the Pinellas area for many years, has been effective at involving stakeholders in redefining the mission of the facility. The PCIC has successfully recruited new tenants, developed business at the facility, and secured an anchor tenant for the main facility. In October, 1998 Raytheon will begin moving an operation into the main building at the STAR Center, leasing 400,000 square feet, or approximately one half of the total space in 100 building

and filling the remaining space capacity at the plant. Raytheon employment at Pinellas is expected to create 400 new jobs and may involve the transfer of another 400 workers from a nearby facility. In addition to Raytheon, twenty two companies have established operations at the STAR facility, employing approximately 750 workers.

Prior to the transfer of site ownership, Lockheed Martin Specialty Components was the Management and Operations contractor. The transition began in March 1994, when Specialty Components was awarded a Right to Use Agreement. As the DOE mission waned at Pinellas, the Agreement allowed Specialty Components to seek customers in the commercial sector. The Pinellas Plant was the first DOE defense facility to obtain a Right to Use Agreement. Beginning in 1994, Specialty Components operated at the site in support of DOE and DOD programs while concurrently targeting private sector companies in industries including medical, environmental, forensics, manufacturing and transportation technologies.

Technology Deployment Center

OWCT and the DOD currently sponsor the TDC at the Pinellas Plant. The TDC is currently administered by the University of Southern Florida. The TDC's objective has been to identify opportunities for regional private enterprise to take advantage of technologies available at the site. The TDC allocates assistance to grantees in three phases if the new product development

proposal passes independent review and meets specific criteria including: a technology push component, strong market potential, working laboratory prototype, and a manufacturing interest at the Pinellas Plant.

Phase I assistance involves approximately \$50,000 in support of prototype development. Phase II can provide \$500,000 of research and engineering support and results in a manufacturable prototype. Phase III also provides an average of approximately \$500,000 to optimize product technology. Project partners are required to pay back from 1.5 to 3 times the level of the TDC investment and to manufacture the product at the Pinellas Plant.

Through the end of FY 1997, OWCT funded \$17.8 million for community transition activities at the Pinellas site. The Pinellas County Industry Council has received a total of \$9.7 million dollars. Of PCIC's total funding, \$5.1 million remains uncoded and will be spent in support of facility preparations for Raytheon as the primary facility tenant. The TDC has received \$4.65 million through FY 1997, with \$300,000 uncoded. Site activities were also supported by the DOD with grants totaling \$8.6 million for the TDC. Additionally, FAA funded \$8 million to develop an explosive detection system. Total federal assistance through fourth quarter of 1997 was \$21.7 million.

OWCT helped establish the CRO, the PCIC, as the single point of contact for coordinating the future reuse of the Pinellas Plant. In August 1994, the Office initiated a meeting and discussions on the status of the Pinellas site and economic development activities. The objective of meeting was to explore opportunities available to attract a major tenant to the site.

OWCT served as the DOE-HQ focal point for development, review, and approval of the documents and contracts for transfer of the Pinellas Plant.

The Office promoted efforts to accelerate cleanup activities necessary to transfer the facility, resulting in transfer of the Pinellas Plant three years ahead of schedule. The transfer allowed DOE to save over \$29 million in operating costs.

3.2 Reuse of Facilities Undergoing Cleanup

Most of DOE's defense nuclear sites either have an ongoing mission or will be undergoing cleanup and not available for closure or transfer to local communities for one or more decades. At sites that have not been transferred to the community, OWCT and the communities are working together to begin reuse of some of the excess lands and buildings, accelerate the cleanup, and use excess equipment. These efforts are readying the site and community for eventual reuse of the complete facility, avoiding decay of facility infrastructure, and furthering the economic development efforts of the community.

By the end of FY 1997, onsite leases to private businesses existed at two sites, Richland and Oak Ridge. Property was being reused at seven sites and more than five million square feet of real property leased. Thousands of pieces of equipment had been loaned, leased, or transferred. The following examples highlight how the efforts are providing benefits.

- The National Conversion Pilot Project at Rocky Flats received support in order to accelerate the decontamination of two buildings and provide jobs for separated workers in a metal fabrication and recycling business. The two buildings will be available for commercialization and lease by the new commercial business.
- Several reuse strategies exist for the East Tennessee Technology Park (ETTP), formerly known as K-25. One is that a number of buildings are being leased to the Community Reuse Organization of East Tennessee (CROET). CROET is then responsible for facility maintenance and upgrades. Through the end of FY 1997, eight leases were active. Income from the leases is assisting CROET achieve self-reliance. Another strategy is that CROET is seeking to accelerate their access to equipment and building space needed for future tenants by funding and conducting the cleanup of some of the equipment.
- Federal property valued at approximately \$275,000 has been loaned from the Idaho site to two businesses with an expected return of the creation of 200-300 new jobs in two years. DOE owns a number of pieces of unique industrial measurement and manufacturing equipment. Some of this equipment requires constant upkeep and maintenance to continue operating. Through transfers and loans, private industry becomes responsible for the upkeep and maintenance. DOE reduces its maintenance costs and continues access to unique equipment and skilled workers.

Facility reuse activities have a significant impact on providing job opportunities, lowering DOE's landlord costs, and continuing access to skilled workers and precision machining related equipment.

3.3 Reduced Lawsuits and Workplace Violence

Work force restructuring can lead to lawsuits by dismissed workers and incidents of workplace violence. Separating and remaining employees may believe that termination decisions or voluntary program offers were discriminatory based on age, sex, race or other factors. Workers may question how decisions were made regarding eligibility for voluntary programs, and separated workers may question the process that resulted in their personal termination. These

questions have lead to a dramatic nationwide increase in the number of workplace discrimination cases in the 1990s, which have risen from less than 10,000 annually to more than 23,000 annually. Fair treatment and open decision making processes regarding separation programs reduce questions by workers and usually results in lower incidences of lawsuits.

During the last decade, workplace violence and its ties with domestic violence has been recognized as a serious safety issue. A 1993 survey by Northwestern National Life Insurance Company found that on average each year 2.2 million workers are attacked, 6.3 million are threatened, and 16.1 million are harassed. This is an incident rate of 2,500 attacks per 100,000 employees. The number of attacks by co-workers, bosses, and former employees is about 30% of the total number of attacks (i.e., 750 per 100,000 employees). Former employees specifically account for about 3% of the attacks or 75 attacks per 100,000 employees. An Executive Order was signed in 1995 directing agencies and departments to address workplace violence and prevention. Manuals addressing prevention of and response to workplace violence have been published by the Office of Personnel Management, General Services Administration, and Occupational Safety and Health Agency.

OWCT's work force restructuring program uses several techniques to help reduce lawsuits and the threat of workplace violence:

- Open process for developing work force restructuring plans with comments solicited from all stakeholders.
- Employees must sign a release form that they will not take legal action in order to receive voluntary separation benefits.
- A final component of this effort is that restructuring programs and treatment of workers are relatively consistent at all DOE sites undergoing work force restructuring. This reduces the potential perception of unfairness between workers involved with activities related to the cold war and other workers.

These techniques appeared to have resulted in a lower incidence of legal challenges and workplace violence than is normally expected from the separation of 42,000 workers. Legal challenges to DOE restructuring efforts have been rare and only one class action lawsuit has been filed and settled. Booz-Allen's review appears to indicate that the reported incidence of work place violence either by former workers or workers remaining at DOE sites is lower than the benchmark of 750 attacks per 100,000 employees.¹² For example, there have been no cases of workplace deaths as a result of workplace violence during this period at the DOE sites.

¹² Based on interviews with personnel representing OWCT and survey by Northwestern National Life Insurance Company.

3.4 Leveraged Funding

The DOE community transition program funds provide an opportunity for communities to seek matching grants and other leveraged funding for community development. Leveraged funding encompasses contributions from the private, local, state and federal sectors. Seven sites that have community transition programs were awarded leveraged funding from these other sources. Figure 3-1 below summarizes matching funds and other leveraged funding achieved at DOE sites. As shown, in addition to leveraged funding, eight sites have received support through various in-kind services.

Figure 3-1. Leveraged Funding Received by Community Organizations

State	Site	Private	Local Gov.	State	Other Fed.	Services in Kind	Other Matching	Total
CO	Rocky Flats		\$0.62M		\$0.11M			\$.17M
FL	Pinellas	\$1.64M	\$0.50M	\$1.23M	\$21.77M	\$1.07M	\$1.387M	\$27.14M
ID	Idaho					\$0.15M – Public	\$3.72M	\$3.74M
OH	Mound					\$0.33M-Private		\$.334M
SC	Savannah River ¹³	\$1.1M			\$1.47M	\$1M – Private		\$3.57M
TN	Oak Ridge	\$12.47M	\$19M	\$1.4M	\$0.64M	\$0.12M – Private, \$0.12M – Public		\$33.76M
WA	Richland	\$2.25M	\$0.17M	\$0.11M	\$0.18M	\$3.371M	\$0.14M	\$6.07M
Total		\$17.46M	\$19.28M	\$2.74M	\$24.01M	\$6.03M	\$5.25M	\$74.77M

Source: Quarterly reports and survey of CROs.

3.5 Promoting a Skilled and Productive Work Force

DOE must carefully balance work force reductions with maintenance of a skilled and effective work force. This work force is needed for critical defense missions, to maintain safety levels and to complete the cleanup of the DOE sites. This is a significant management challenge in a period of downsizing and site closure. A number of valued employees including those with critical skills may ask the question, “Why wait to be terminated?”, and find employment opportunity elsewhere.

3.5.1 Work Force Restructuring Offers

As directed in Section 3161, the guidance for work force restructuring indicates that retraining, early retirement, attrition, and other options should be used to minimize layoffs. OWCT has provided leadership to encourage the best commercial practices. DOE uses internal placements, retraining, attrition, early retirement and voluntary separations as a means to avoid involuntary separations. These programs are used by commercial entities and others to:

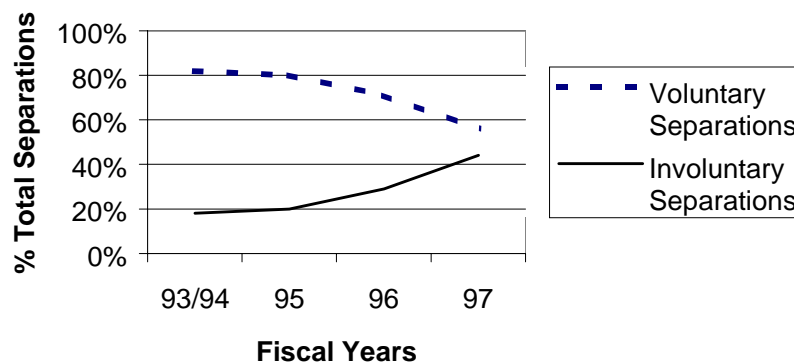
¹³ Savannah River’s estimates were adjusted to reflect actual leveraged funding rather than measuring the outcome of their efforts.

- Avoid damage to remaining employees' morale
- Provide an incentive for the remaining work force to stay and get the job done
- Target workers for retraining to support new missions or programs
- Exceed work force restructuring limits such as those in collective bargaining agreements regarding the number and type of layoffs that can be performed
- Minimize legal challenges

Also in keeping with commercial practices, each new voluntary separation program offered at a site is valued equal to or less than previous recent offers.¹⁴

In FY 1994, 1995, and 1996 voluntary incentive separation packages were a highly successful method for prime contractor employee reductions. Voluntary separations accounted for approximately 80 percent of all separations with early retirement comprising 30 percent of the total. Since FY 1994, the number of voluntary separations has been steadily decreasing. In FY 1997, the percent of voluntary separations decreased to 56 percent. Figure 3-2 depicts these trends.

Figure 3-2. Trends in Separation Programs



Although separations through early retirement and voluntary action are the preferred method of work force restructuring it appears that most personnel willing to be separated and personnel eligible for early retirement already have chosen to take voluntary separations. Recent voluntary programs have had, in some cases, difficulty in achieving their objectives.

This trend is part of the normal evolution in work force restructuring related to changing missions and facility closures. In 1993, the focus of the program was improving the skills mix as the Department changed its focus to environmental management. As the program continued, the focus has changed to reducing surplus labor in specific categories, and most recently at many sites to maintain normal business operations. Now, according to our interviews at field offices, the preferred method for employee reductions will be managed attrition with infrequent offers of

¹⁴ Based on statements from OWCT personnel and interviews with field office personnel.

voluntary programs. This trend may increase or decrease in the future, if budgets for DOE's missions are significantly altered.

3.5.2 Future Restructuring Needs and Work Force Planning

OWCT plans and estimates future work force reductions using proposed Congressional funding levels and the Office of Management and Budget (OMB) spending targets under the balanced budget agreement. This yields an estimate of total site work force reductions totaling about 3,000 in FY 1999 followed by reductions of 4,000 to 5,000 in FY 2000 and 2001. OWCT estimates are revised several times a year as new information concerning budgets and program funds becomes available. In the future, skills mix changes required by EM's accelerated clean-up program may require retraining and/or separation of additional workers.

To ascertain the level of planning by DOE sites, we surveyed 14 sites to identify plans for work force reductions with enhanced benefits. Our survey revealed that with few exceptions the sites conduct minimal site-wide work force planning for future fiscal years. OWCT is working with the sites to improve their work force planning.

3.5.3 Bargaining Unit and Other Personnel Impacts

In most of the work force restructuring plans, there was no special consideration given to bargaining unit employees. One of the possible special considerations made was to ensure that the severance offered at the site was approved by the bargaining unit, as the bargaining unit is a stakeholder at these sites. In some cases, the severance package offered to bargaining unit employees was based upon a seniority scale as set by the bargaining unit. Of the thirteen sites surveyed, ten provided data on bargaining unit and non-bargaining unit employees. Approximately 10,000 of the 42,000 separated workers or 24 percent were bargaining unit employees according to the results of our survey.

3.5.4 Remaining Work Force Separation Liability

Since 1993, employment by prime contractors at DOE sites has been reduced by more than 43,000. Our site survey indicated that between 33,000 and 38,000 of these workers could be classified as "cold war workers."¹⁵ At the end of FY 1997, it is estimated that approximately 105,000 on-site management contractor team employees remain, of which between 45,000 and 65,000 workers can be classified as cold war workers.

3.5.5 Worker Medical Benefits and Costs

In 1992, Secretary of Energy James Watkins directed that all prime contractor employees separated from DOE sites and not otherwise eligible for another medical program would be eligible for displaced worker medical benefits.¹⁶ Under this program, employees can continue to participate in their former employer's medical program. During the first year after separation, the former employee pays the same amount as he or she would have paid as an employee. During the second year after separation, the former employee pays one-half the applicable

¹⁵ Cold war workers are generally considered to have been workers who were employed on-site at DOE defense nuclear facilities prior to September 21, 1991, the date at which the cold war was generally deemed to have ended.

¹⁶ This was further codified in DOE Acquisition Letter Number 93-4 on April 7, 1993.

Consolidated Omnibus Budget Reconciliation Act (COBRA) rate. In the third and following years, the employee pays the full COBRA rate.

This program was used by more than 4,000 employees in the first year. In 1995 and 1996, 3,314 employees used the program. In 1997, approximately 2,700 employees used the program. The annual average cost for displaced worker medical benefits has ranged from a high of \$4,800 to a low of \$1,800 per employee. Total cost for this program from 1993 through 1997 is approximately \$31.5 million.

3.6 Findings

The work force restructuring and community transition programs appear to fulfill a key role in the work force restructuring process by coordinating work force and community transition activities from a national perspective. Some of the important impacts of OWCT efforts have included:

- Facilitating early closures at Pinellas and Mound thereby providing DOE with significant annual savings at each site in reduced landlord and facility operations.
- Encouraging facility reuse strategies that return sites to industrial manufacturing generate huge savings in remediation costs (e.g., \$1 billion at Mound.).
- Providing leadership for effecting early closures and facility reuse strategies at other major DOE sites.
- Assisting CROs and other community groups receive matching grants, services-in-kind and other leveraged funding.
- Minimizing workplace violence and discrimination lawsuits as indicated by no worker violent deaths and minimal class action discrimination lawsuits by helping assure fairness to all site workers.

Chapter 4

Funding and Expenditures

The Booz·Allen study team was tasked to examine the funding, expenditures and uncOSTed balance for OWCT funds. The process for conducting this review began with establishing a baseline of financial data reported to Congress. The DOE's Financial Information System (FIS) is the formal departmental accounting system and was used to develop the baseline of obligated funds, expenditures and uncOSTed balances. The primary information resource for community transition funds is a quarterly report from the DOE field offices to OWCT. The report contains overall financial data and key performance measures such as business starts and jobs created. Work force restructuring program information is gathered through data calls to the field offices. Telephone interviews, site visits and surveys were used to gather additional financial data for this report. Annual reports to Congress and responses to Congressional Qs&As were examined in comparison with the FIS and input to a spreadsheet database for the purposes of financial analysis and reconciliation. In addition, DOE field office reports were examined to verify funding obligations and expenditures by site.

The study team also sampled accounting reports for OWCT obligations and expenditures at several DOE field offices and found that transactions could be traced through the specific OWCT accounts established to provide 3161 funding to the DOE field offices. In addition, further financial detail is available as it pertains to community transition grants because of the paperwork required to process grants. A review of CRO records at several sites indicate that grant monies can be traced to specific projects and expenditures. Financial detail was not made available at DOE sites to account for expenditures in work force restructuring beyond specific categories (e.g. separation, retirement, training, etc.,). The Booz·Allen study was not tasked to conduct an audit of M&O contractor records that would validate the allocation of funds and expenditures as directed by the DOE.

The following sections provide a description of the 3161 funding, expenditures and uncOSTed balance.

4.1 OWCT Funding FY 1994 – FY 1997

Total appropriations for OWCT were verified by Booz·Allen as \$467,514,000 in 3161 funds for FY 1994 – FY 1997.¹⁷ The appropriated amounts by year are shown in Figure 4-1 below.

¹⁷ Funds shown in the OWCT "Base Report" depicting appropriations and adjustments

Figure 4-1. 3161 Appropriations FY 1994 – FY 1997¹⁸

Fiscal Year	Initial Appropriation	Adjustments	Final Appropriated Amount
1994	\$100,000,000	+ \$100,000,000	\$200,000,000
1995	\$124,144,000	- \$818,000	\$123,326,000
1996	\$82,500,000	- \$812,000	\$81,688,000
1997	\$62,000,000	+\$500,000	\$62,500,000
Total			\$467,514,000

The FIS reports show that OWCT obligated \$461,550,972 in 3161 funds for FY 1994 – FY 1997. These obligated amounts are shown in Figure 4-2, below, by DOE field office and for headquarters.

Figure 4-2. 3161 Obligated Funding by DOE Office FY 1994 – FY 1997

Field Office	FIS FY 1994 - FY 1997 Total
Albuquerque	\$119,143,004
Rocky Flats	\$80,488,493
Oak Ridge	\$67,127,391
Nevada	\$46,337,387
Savannah	\$45,624,700
Ohio	\$41,191,850
Headquarters	\$17,778,786
Richland	\$17,489,900
Idaho	\$15,598,924
Oakland	\$9,148,250
PETC	\$1,389,787
Chicago	\$232,500
Total	\$461,550,972

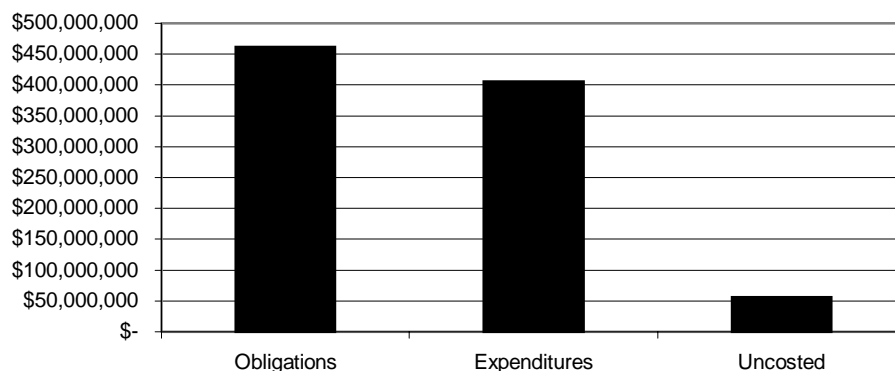
The obligated funding reported by FIS and the information found in the Annual Report shows that the three DOE Field Offices receiving the most 3161 funds are Albuquerque, Rocky Flats and Oak Ridge. Together, the three field offices received approximately 58 percent of 3161 funding. The Chicago office received the least amount of funding which was used for work force restructuring at Argonne and Brookhaven National Labs.

4.2 OWCT Expenditures FY 1994 – FY 1997

During the FY 1994 – FY 1997 period, \$405,361,805 was expended by the DOE field offices, leaving \$56,189,167 in obligated uncosted 3161 funds.¹⁹ Figure 4-3, below, depicts total 3161 obligations, expenditures and the uncosted carryover as of the fiscal year-end 1997.

¹⁸ This report uses FY 1994 as a starting date for OWCT's 3161 funded projects. OWCT reports include end of year FY 1993 data within FY 1994 statistics. The study team recognizes the differences in reporting methods. For the purposes of this report, FY 1993 - 1997 and FY 1994- 1997 data are treated as equal.

Figure 4-3. 3161 Obligations, Expenditures and Uncosted



The expenditures for DOE field offices and headquarters under OWCT funds are shown in Figure 4-4 below. The largest expenditures of 3161 funds were Albuquerque, Rocky Flats and Oak Ridge. Together, they represent more than 61 percent of the total expended amount.

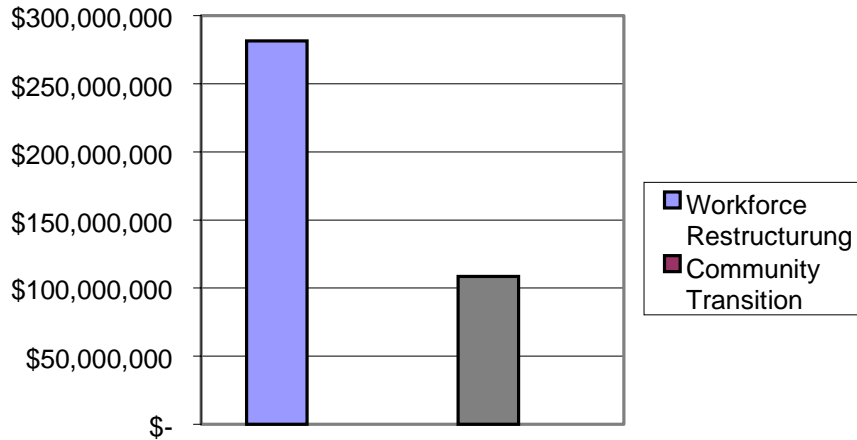
Figure 4-4. OWCT Expenditures FY 1994 – FY 1997

Field Office	FY 1994 - FY 1997
Albuquerque	\$109,863,505
Rocky Flats	\$79,582,370
Oak Ridge	\$56,695,396
Savannah	\$39,235,035
Ohio	\$36,009,566
Nevada	\$36,001,912
Idaho	\$14,422,020
HQ	\$14,336,887
Oakland	\$9,058,250
Richland	\$8,878,577
PETC	\$1,158,287
Chicago	\$120,000
Total	\$405,361,805

FIS reports indicate that of the total 3161 expenditures, \$281,507,490 was expended for work force restructuring and that \$108,479,800 was expended for community transition with the remainder, (\$15.3 million) expended for program support. These expenditures are depicted proportionately in Figure 4-5 below.

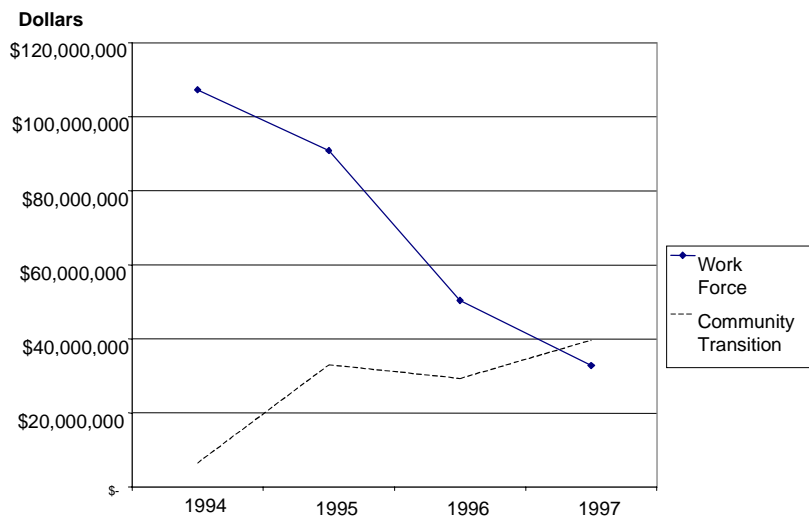
¹⁹ There is an additional \$7.98 million in uncosted funds at Savannah River which was recast from the DP Program to support Worker and Community Transition.

Figure 4-5.
3161 Work Force Restructuring and Community Transition Expenditures



Although total expenditures for work force restructuring far exceed expenditures for community transition, fiscal year trends indicate that work force restructuring expenditures are decreasing and community transition expenditures are increasing. In FY 1997, community transition expenditures exceeded work force restructuring expenditures for the first time. Community transition grants will be increasingly important as economic diversification and facility reuse projects mature. These trends are depicted in Figure 4-6 below.

Figure 4-6.
Trends in Work Force Restructuring and Community Transition Expenditures



4.3 OWCT Uncosted Funds

Figure 4-7 below depicts the uncosted balances by DOE field office. The uncosted balance for 3161 funds is \$56,189,167 and represents 12% of obligations.²⁰ The cumulative uncosted balance reflects outyear commitments in the DOE field offices for retirement funds and community transition grants which have not been disbursed. The largest cumulative uncosted balance is \$40.4 million in Community Transition funding which would be consistent with outyear commitments typical of economic diversification initiatives. The cumulative uncosted balance for Work Force Transition funding is \$14.6 million. The cumulative uncosted balance for program support is \$1.2 million.²¹

Figure 4-7. Uncosted Funds By Field Office²²

Field Office	Work Force Transition	Community Transition	Program Support	FY 1994 – FY19 97 Total
Oak Ridge	\$3,609,201	\$6,781,642	\$41,152	\$10,431,995
Nevada	\$7,923,668	\$2,411,807	\$0	\$10,335,475
Albuquerque	\$(356,075)*	\$9,606,979	\$28,595	\$9,279,499
Richland	\$0	\$8,609,734	\$1,589	\$8,611,323
Savannah	\$(284,551)*	\$6,674,216	\$0	\$6,389,665
Ohio	\$344,660	\$4,837,624	\$0	\$5,182,284
HQ	\$2,181,723	\$364,330	\$895,846	\$3,441,899
Idaho	\$601,022	\$575,882	\$0	\$1,176,904
Rocky Flats	\$542,071	\$364,052	\$0	\$906,123
PETC	\$0	\$23,500	\$208,000	\$231,500
Chicago	\$0	\$112,500	\$0	\$112,500
Oakland	\$0	\$90,000	\$0	\$90,000
Total	\$14,561,719	\$40,452,266	\$1,175,182	\$56,189,167

* Minor financial adjustment required to balance account (below control account level)

The Oak Ridge and Nevada field offices each had uncosted balances that exceeded \$10 million at the end of FY 1997.

4.4 Work Force Restructuring Funds FY 1994 – FY 1997

OWCT reports show that total funding for work force restructuring in Defense Nuclear Facilities for FY 1994 – FY 1997 amounted to \$718,997,190.²³ Of this amount, OWCT has reported a contribution of \$296,194,354 in section 3161 funds, or 41 percent of the total. This amount is approximated by the FIS accounting reports.²⁴ OWCT was not able to confirm the source of the \$422,802,836 in non-section 3161 funds.²⁵ These funds are based on actuarial values, and as such, the current value of program contributions to equal the actuarial cost may be less than the

²⁰ The uncosted balance does not include \$7.98 million recast from DP to OWCT accounts at Savannah River.

²¹ Program support obligated and uncosted was reduced to \$656K by July of FY 1998.

²² Uncosted Data Source: FIS Reports

²³ OWCT 1997 Annual Report to Congress.

²⁴ FIS Accounts confirm that \$296,069,209 was obligated to Work Force Restructuring Activities for FY 1994 – 1997.

²⁵ OWCT reported that the sources for their estimates were the annual reports from the field offices and subsequent discussions with the field offices as estimates were finalized.

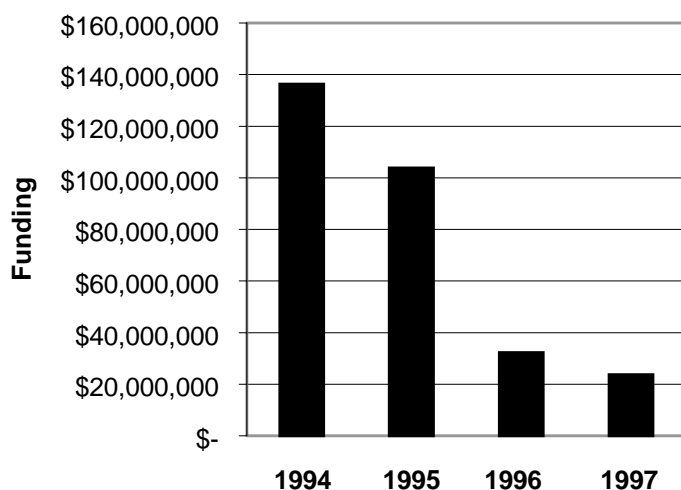
reported value.²⁶ Interviews and correspondence with DP and EM budget analysts partially verified reported contributions to work force restructuring funding. The following information was provided concerning non-section 3161 funding of work force restructuring.

DP sources state “the \$82.9M in FY 1993 was the amount obligated for work force restructuring plans at Kansas City (\$6,466,521), Savannah River (\$57,943,000), Nevada (\$2,731,000), Oak Ridge (\$15,654,000), and Rocky Flats (\$95,000). Those plans also had expenditures in FY 1994 which were paid from the OWCT Program account. The amounts shown [above] were the amounts obligated in FY 1993 [by DP] based on the cost estimates in the plans.”

EM sources did not verify EM obligations for work force restructuring beyond \$37 million between FY 1994 – FY 1997. Based on information provided by these offices, total funding from DP and EM for work force restructuring in FY 1994 – FY 1997 was verified as approximately \$120 million.

Overall, OWCT obligated funding for work force restructuring has steadily decreased since 1994. The most significant decrease occurred when annual obligations decreased by \$71.5 million from \$103.8 million in FY 1995 to \$32.3 million in FY 1996. Figure 4-8 depicts the declining trend in obligations.

Figure 4-8.
Trends in Work Force Restructuring Obligations FY 1994 – FY 1997



The breakout of work force restructuring funds by DOE field office in Figure 4-9, below, shows that Albuquerque received 31 percent of the work force restructuring funds for sites including the Los Alamos and Sandia National Labs, and the plants at Pinellas and Kansas City. Rocky Flats

²⁶ Interviews with Human Resource managers indicated that some funding for work force restructuring was derived from overfunded pension funds and not DOE program funds.

received 20 percent of work force restructuring funds. The smallest funding amounts were for the Pittsburgh Energy Technology Center and the Idaho National Environmental Engineering Laboratory.

Figure 4-9.
3161 Work Force Restructuring Obligations by Field Office FY 1994 – FY 1997

Field Office	Work Force Restructuring Obligations
Albuquerque	\$93,215,829
Rocky Flats	\$60,099,492
Nevada	\$37,718,713
Oak Ridge	\$33,178,257
Savannah	\$28,102,161
Ohio	\$26,541,750
Oakland	\$8,000,000
Richland	\$4,623,000
Headquarters	\$3,166,090
Idaho	\$1,273,924
PETC	\$149,993
Total	\$296,069,209

4.5 Work Force Restructuring Expenditures FY 1993 – FY 1997

OWCT has reported work force expenditures including non-Section 3161 funds from other DOE programs. Figure 4-10 depicts the expenditures of Section 3161 as reported in FIS and non-section 3161 funds as reported in the OWCT Annual Report to Congress.²⁷ The data provided indicates that other DOE program expenditures for work force restructuring exceed the amounts expended under OWCT funds.

²⁷ Expenditure of 3161 funds has been verified.

Figure 4-10.
3161 Work Force Restructuring Expenditures by Field Office
FY 1994 – FY 1997

Field Office	OWCT (3161) Expenditures	Other DOE (non-3161) Expenditures
Albuquerque	\$93,571,904	\$18,651,089
Rocky Flats	\$59,557,421	\$36,619,845
Nevada	\$29,795,045	\$6,337,733
Oak Ridge	\$29,569,056	\$13,714,026
Savannah	\$28,386,712	\$97,310,139
Ohio	\$26,197,090	\$14,279,222
Oakland	\$8,000,000	\$0
Richland	\$4,623,000	\$125,590,297
Headquarters	\$984,367	\$0
Idaho	\$672,902	\$41,976,809
PETC	\$149,993	\$0
Chicago	\$0	\$15,645,788
Total	\$281,507,490	\$370,124,948

Albuquerque expended \$93.6 million in section 3161 work force restructuring funds at multiple sites including Pinellas, Kansas City, and Sandia and Los Alamos National Laboratories. Rocky Flats expended \$59.6 million for work force restructuring, Nevada expended \$29.8 million and Oak Ridge expended \$29.6 million at several sites including ETTP (K-25) and Y-12.

A different perspective on work force restructuring expenditures is the breakout by benefit category. Figure 4-11 depicts obligations and expenditures as reported in FIS for FY 1994 – FY 1997. The largest obligation was for worker severance totaling \$166.3 million. The second largest obligation was for retirement totaling \$62.7 million, and the third largest obligation was for training totaling \$56.9 million. The uncosted carryover for work force restructuring is \$14.6 million.

Figure 4-11.
3161 Work Force Restructuring Expenditures by Category
FY 1994 – FY 1997

Benefit Categories	Obligations	Expenditures	Uncosted
Training	\$56,905,593	\$50,031,201	\$6,874,392
Relocation	\$897,480	\$591,070	\$306,410
Retirement	\$62,681,894	\$62,559,285	\$122,609
Outplacement*	\$9,320,913	\$8,936,223	\$384,690
Severance*	\$166,263,329	\$159,389,711	\$6,873,618
Totals	\$296,069,209	\$281,507,490	\$14,561,719

* Data corrected from FIS due to input errors that were identified during review of costs.

4.6 Community Transition Funding FY 1994 – FY 1997

The OWCT annual report shows that total DOE obligated funding for community transition for FY 1993 – FY 1997 amounted to \$191,426,006.²⁸ FIS accounting reports show the \$148.9 million in obligated funds plus an additional \$6.9 million recast at Savannah River and used for community transition activities.²⁹

Figure 4-12 below provides field office specific information on the \$148.9 million of 3161 funding for community transition for FY 1994 – FY 1997. Oak Ridge received the most funding (21 percent) followed by Albuquerque (16 percent) and Savannah River (16 percent). The Oak Ridge funds are primarily directed towards CROET including ETTP and other major projects including the Y-12 Manufacturing Center and Skills Campus. Over \$17 million of the funding at Albuquerque was used for the Pinellas site development and transfer. A large portion of the funding at Savannah River is for economic analysis and infrastructure (e.g., roads) improvement, which has resulted in new plants being built in the area by Bridgestone-Firestone and SKF Automotive Bearing and other major projects include equipment reuse and worker retraining.

Figure 4-12.
3161 Community Transition Obligations by Field Office
FY 1994 – FY 1997

Field Office	Obligations
Oak Ridge	\$33,443,595
Albuquerque	\$25,640,121
Savannah	\$17,522,539
Rocky Flats	\$20,389,001
Ohio	\$14,650,100
Idaho	\$14,325,000
Richland	\$12,744,400
Nevada	\$8,618,674
Headquarters	\$1,041,136
Oakland	\$300,000
Chicago	\$232,500
PETC	\$25,000
Total	\$148,932,066

While funding has been reduced, community transition projects at sites the team visited show continuing development and commitment. Interviews with DOE field managers and CRO directors indicate out-year funding commitments have been made and are the basis for implementing economic diversification and facility reuse plans at major DOE sites scheduled for closure and transfer including ETTP and Mound.

²⁸ FY 1997 Report, pg. 25, Exhibit I.12

²⁹ FIS reports indicate that \$148.9 million in 3161 funds was obligated to Community Transition activities. An additional \$6.9 m was recast at Savannah River revising the total obligated funds for community transition = \$155.8 million.

4.7 Community Transition Expenditures FY 1994 – FY 1997

At the end of FY 1997, OWCT had obligated \$148,932,060 and the program had expended \$108,479,000. Community transition expenditures were greatest at Oak Ridge, Albuquerque and Rocky Flats. Together, the three field offices comprise more than 58 percent of the total expenditures for community transition. In Oak Ridge, over 90 percent of the expenditures were for the Oak Ridge Centers for Manufacturing Technology and the Manufacturing Skills Campus at Y-12. Under the Albuquerque field office, approximately \$10.7 million was expended at Pinellas including the Technology Deployment Center. MMCIC has expended approximately \$8 million to implement the facility transfer agreement and provide for facility improvements and operations. Over 75 percent of the expenditures at Rocky Flats were for the National Conversion Pilot Project. Community transition expenditures are summarized by field office in Figure 4-13.

Figure 4-13.
Community Transition Expenditures by Field Office
FY 1994 – FY 1997

Field Office	Community Transition
Oak Ridge	\$26,661,953
Rocky Flats	\$20,024,949
Albuquerque	\$16,033,142
Idaho	\$13,749,118
Savannah	\$10,848,323
Ohio	\$9,812,476
Nevada	\$6,206,867
Richland	\$4,134,666
Headquarters	\$676,806
Oakland	\$210,000
Chicago	\$120,000
PETC	\$1,500
Total	\$108,479,800

4.8 Findings

From FY 1994 through FY 1997, OWCT was appropriated \$467.5 million, obligated \$461.5 million, and expended \$405.3 million. A total of \$296 million was obligated to worker transition activities and \$149 million was obligated to community transition activities. The remainder was obligated to program support. Some other specific findings included:

- The cumulative uncosted balance of 3161 funds is \$56,189,167.
- The exact amount of funding and expenditures by other DOE programs (e.g. DP and EM) in work force restructuring and community transition has not be verified.

Chapter 5

DOE Guidance and Program Criteria

Section 3161 of the NDAA for FY 1993 provides the legal foundation for the work force restructuring and community transition program. The Act itself is brief, and requires:

- “Upon determination that a change in the work force at a defense nuclear facility is necessary, the Secretary of Energy ... shall develop a plan for restructuring the work force ... that takes into account—
 - 1) the reconfiguration of the defense nuclear facility; and
 - 2) the plan for the nuclear weapons stockpile”
- Consultation with the Secretary of Labor, appropriate representatives of local and national collective bargaining units, state and local governments and state and local institutions of higher education, and community groups in communities affected by the restructuring plans
- Preparation of the plans be guided by the following objectives:
 - Changes should be accomplished so as to minimize social and economic impacts
 - Provision of 120 day notice to employees and communities
 - Changes should be accomplished through the use of retraining, early retirement, attrition, and other options that minimize layoffs
 - Employees should to the extent practicable receive preference in-hiring, and retrained for work in environmental and waste management activities
 - DOE should provide relocation assistance and assist employees in obtaining appropriate retraining, education, and re-employment assistance
 - DOE should provide local impact assistance, coordinated with DOL, DOD, DOC programs
- That work force restructuring plans be periodically updated

These requirements of the Act form the basis for the development and implementation of worker restructuring and community transition activities by the Department and OWCT.

To implement the Act, the Department and OWCT with the DOE field offices are responsible for developing specific 3161 plans consistent with Section 3161 work force restructuring guidance. The field office coordinates reviews by stakeholders including the contractor. The work force restructuring plans are reviewed by OWCT and approved by the Secretary of Energy. Community transition plans are developed by CROs and reviewed by the field office. These transition plans and other direct program requests not included in the transition plan are forwarded to OWCT and EDA for review and approval. Based upon recommendations from OWCT and EDA, the community transition plans are approved by the Secretary of Energy. The Secretary of Labor reviews plans that involve training programs that are focused on economic development. The specific funding

available for each of these types of activities is determined based upon an evaluation of the potential effects of the plans and local needs.

To implement work force restructuring activities guidance was developed and issued in April 1993 by the Task Force. The initial guidance for community transition was issued in February 1994 by OWCT. Both of these guidances have been reissued to provide more specific program direction as OWCT gained experience and results from conducting the program.

Work Force Restructuring Guidance	Community Transition Guidance
<ul style="list-style-type: none">• April 1993 - original• March 1994• April 1995• February 1996• February 1997• Draft May 1998	<ul style="list-style-type: none">• February 1994 - original• January 1997

The following sections summarize the major elements of 3161 guidance and indicate the policies and interpretations developed by DOE to assist with implementing provisions of the law.

5.1 Work Force Restructuring Guidance

Figure 5-1 summarizes the major requirements of 3161, and indicates how the guidances evolved with each revision and became more specific regarding authorizing specific programs and recommending limits for certain programs. For comparative purposes, the contents of DOE Order 3309.1A of November 30, 1992 are also shown, since this was the applicable guidance prior to Section 3161.

The initial work force restructuring guidance was issued by the Task Force in April 1993. At the time, responsibility for preparing draft work force restructuring plans was assigned to the Operations Offices of the affected sites. The guidance focused on provisions for a restructuring plan, issuing notices of future changes in mission, and supporting preferential hiring for separated workers. The guidance also addressed who qualifies for work restructuring as applicable to primarily contractors working on-site at DOE facilities such as:

- M&O contractor employees at facilities
- Contractor or subcontractor employees determined to have worked for several or more years at a facility

The guidance incorporated objectives of Section 3161 and provided a basis for the DOE Field offices to proceed. The first revision to the guidance was issued in March 1994 following the formation of OWCT. The guidance provided more details on preparation of work force

restructuring plans.³⁰ Restructuring plans were to be prepared for each defense nuclear facility work force change, regardless of the number of affected employees. For non-defense facilities, however, a plan for work force changes affecting 100 or more positions should be submitted. Also, this guidance included more details on how to achieve the goals described by the law. For the first time, the guidance suggests a range of \$15,000 to \$25,000 cost per displaced worker as an appropriate range for work force restructuring plans. It provided recommended funding limits for tuition assistance as well as retraining. Relocation assistance also was given a specific range. The guidance restated that medical benefits should be available to separated workers.

The April 1995 revisions included:

- Changing the requirement for a restructuring plan to include only those sites that planned on changes that affected 100 or more employees in a 12-month period
- Certification by the employee for preference-in-hiring
- Specific outplacement training

The February 1996 edition had only a few relatively minor changes such as the recognition of the JOBBS bulletin board system as a means of furthering preference in hiring. The May 1998 DRAFT guidance provides additional flexibility to field managers so that plans are not limited to a single action, but may apply to any restructuring that may occur at a site. It also conforms with the provisions of the FY 1998 Energy and Water Defense Appropriations Act limiting funds for enhanced separation benefits to those funds specifically allocated to the OWCT account. Additionally, the guidance states that the work force restructuring plan should be developed in coordination with community reuse objectives.

Working within the work force restructuring guidance, each site develops its own site-specific work force restructuring plan. Figure 5-2 summarizes major provisions of site-specific work force restructuring plans. This summary compares the plan offered at each of the sites. A comparison and careful analysis of provisions of the work force restructuring guidance in Figure 5-1 with the summary of site-specific benefits in Figure 5-2 indicated that the plans followed the parameters described in the guidance to meet the objectives of Section 3161.

³⁰ In 1992, Secretary of Energy James Watkins directed that all prime contractor employees separated from DOE sites and not otherwise eligible for another medical program would be eligible for displaced worker medical benefits. This was further specified in DOE Acquisition Letter Number 93-4 on April 7, 1993.

Figure 5-1. Comparison of Work Force Restructuring Guidances and Section 3161

DOE Order 3309.1A November 30, 1992	NDAA for FY 1993 Section 3161	April 1993 Guidance	March 1994 Guidance	April 1995 Guidance	February 1996 Guidance	May 1998 DRAFT Guidance
Includes requirements that are to be applied to the universe of contractors awarded a management and operating contract or other types of cost-reimbursement contracts or subcontracts, to be performed on-site at a DOE-owned or-leased facility	Requirements and Benefits Applicable to work force at Defense Nuclear Facilities	Yes; also applied to any site undergoing work force restructuring in the Department. Generally applicable to M&O contractors or other on-site contractors as appropriate.	Yes; also applied to any site undergoing work force restructuring in the Department. Generally applicable to M&O contractors or other on-site contractors as appropriate.	Yes; also applied to any site undergoing work force restructuring in the Department. Generally applicable to M&O contractors or other on-site contractors as appropriate.	Yes; also applied to any site undergoing work force restructuring in the Department. Generally applicable to M&O contractors or other on-site contractors as appropriate.	Yes; also applied to any site undergoing work force restructuring in the Department. Generally applicable to M&O contractors or other on-site contractors as appropriate.
When reductions become necessary, it is DOE policy that such reductions be carefully planned and coordinated with Department field and Headquarters organizations	Prepare a work force restructuring plan	A plan should be developed for any restructuring in a defense nuclear facility and for restructuring that may affect 250 or more employees within a 12 month period at a non-defense facility.	A plan should be developed for any restructuring in a defense nuclear facility and for restructuring that may affect 100 or more employees within a 12 month period at a non-defense facility	A plan should be developed where changes in the nature or structure of the work force may affect 100 or more employees at a site within a 12 month period	A plan should be developed where changes may affect 100 or more employees at a site within a 12 month period	A plan should be developed not limited to a single action or year, but rather, will apply for any restructuring that may occur at a particular site.

DOE Order 3309.1A November 30, 1992	NDAA for FY 1993 Section 3161	April 1993 Guidance	March 1994 Guidance	April 1995 Guidance	February 1996 Guidance	May 1998 DRAFT Guidance
Employees scheduled for a layoff should be given as much notice as practical. A 60-day notice required by WARN is as a minimum	Announcement of reduction in force 120 days prior to change in mission	Provide 120 day notice before commencement of changes in mission if layoffs fall under the provisions of WARN, employees must be given 60 days layoff notice	Provide at least 120 day notice before the commencement of changes in mission	Provide at least 120 day notice before involuntary layoffs begin	Provide at least 120 day notice before involuntary layoffs begin	Advance notification of intent to implement work force restructuring actions should be provided as early as possible to maximize notification to the work force and the community, with an objective of 90 days advance notice
Minimize the number of individuals to be separated involuntarily, incorporating provisions to retain personnel with essential knowledge and skills	Work force restructuring should be accomplished through retraining, early retirement, attrition ...	These benefits can be provided as funds allow and normal practices indicate	Early retirement and voluntary separation may be limited by skill levels to preserve critical skills and knowledge	Early retirement and voluntary separation enhanced benefits are optional	Early retirement and voluntary separation enhanced benefits are optional	To the extent practicable minimize through retraining efforts, then through early retirement, attrition and other options
	Work force restructuring should be accomplished through ... and other options to minimize layoffs	Medical benefits are not discussed in guidance but earlier memorandum from Secretary Watkins extending benefits still applies.	Medical benefits are to be extended for terminated employees	Medical benefits are to be extended for terminated employees	Medical benefits are to be extended for terminated employees	Medical benefits are to be extended for terminated employees

DOE Order 3309.1A November 30, 1992	NDAA for FY 1993 Section 3161	April 1993 Guidance	March 1994 Guidance	April 1995 Guidance	February 1996 Guidance	May 1998 DRAFT Guidance
Management and Operating contractors will provide retraining opportunities for employees affected by reductions, or support employees who utilize outside retraining facilities, when this can be done without an unreasonable increase in cost	To the extent practicable, terminated employees shall receive a preference in hiring and be retrained for environmental restoration/waste management activities	Yes M&O contractors should review resumes of displaced workers before hiring Resume exchange system is being developed	Yes Retraining considered practical when it can be accomplished at a cost of \$10K or less Education assistance recommended to be made available in amounts up to \$10K	Yes Workers must certify intent to use preference in hiring Retraining considered practical when it can be accomplished at a cost of \$10K or less and in a timely manner (6 months or less) Construction worker benefits	Yes Workers must certify intent to use preference in hiring Retraining in environmental management/waste management should be done in timely manner and at reasonable cost (6 months, <\$10K) Construction worker benefits	Yes; preference in hiring-no change
	Relocation assistance should be provided	It is provided without restrictions	Yes, it is provided with the following restrictions: Early retirees are ineligible Involuntary/voluntary eligible within a cost range of \$2-5K	Yes, it is provided with the following restrictions: Early retirees are ineligible Focus on involuntarily separated workers rehired at other DOE sites within a cost range of \$2-5K	Yes, it is provided with the following restrictions: Early retirees are ineligible Focus on involuntarily separated workers rehired at other DOE sites within a cost range of \$2-5K	Requests for funding should be considered to minimize impact

DOE Order 3309.1A November 30, 1992	NDAA for FY 1993 Section 3161	April 1993 Guidance	March 1994 Guidance	April 1995 Guidance	February 1996 Guidance	May 1998 DRAFT Guidance
Contractors should provide affected employees, before and after separation, with counseling covering job search techniques, resume preparation and mailing, and identification of job openings	Assistance in obtaining appropriate retraining, education, and reemployment assistance should be provided to terminated employees	Provides general guidance and DOE is investigating other potential funding sources.	Provides general guidance on this language	Yes; outplacement assistance is recommended	Yes; outplacement assistance is recommended	Requests for funding should be considered to minimize impact

Figure 5-2. Summary of Site-specific Work Force Restructuring Plans

Site (Plan Date)	Training	Outplacement	Education	Early Retirement	Involuntary Separation Severance Pay	Severance Voluntary Separation	Lump sum Voluntary Separation
Fernald (February 1995)	Retained employees; seminars on environmental management, computer software, administrative support, and radiological technician	All affected employees; includes workshops, and career transition center	\$5,000 over a period of 2 years; must begin within 1 year of termination	Early retirees credited 3 years to service and age	Graduated severance from 3 to 24 weeks	Graduated severance 3 to 24 weeks	\$15,000; plus graduated severance of 5 to 50 weeks with no additional benefits or; graduated severance of 5 to 50 weeks with additional benefits
Idaho (May 1996)	Retained employees	All affected employees; includes job identification, external interviews, resume distribution, etc	\$10,000 over a period of 4 years; must begin within 1 year of termination	No specifics identified	Graduated severance from .5 weeks pay per year up to 1 week of pay per year, maximum of 16 weeks	Six months pay	Not offered
Kansas City (June 1994)	Retained and Separated employees; separated employees receive up to \$5,000 over 2 years	All affected employees; includes counseling, resume services, automated listing of jobs, etc	\$5,000 over a period of 2 years; limited to areas of valid job opportunity	Early retirees are credited 3 years to service and age	1 week of pay per year of service	60 days pay plus separation pay per schedule (up to 10 months equivalent at 30 years of service)	Not offered
Los Alamos (June/ November 1995)	No specifics identified	No specifics identified	\$10,000 over a 4 year period	Not offered	Graduated severance from 1 to 2 weeks pay per year maximum of 52 weeks	Graduated severance schedule from 1 to 2 weeks pay per year of service up; (max of 52 weeks)	Not offered

Site (Plan Date)	Training	Outplacement	Education	Early Retirement	Involuntary Separation Severance Pay	Severance Voluntary Separation	Lump sum Voluntary Separation
Mound (May 1994)	None	All affected employees; includes job searches, job market information, interview skills, etc	\$10,000 for a degree program; \$5,000 for a job-specific program over a period of 2 years with an additional 2 year option	Annuity based on pension calculation plus a payment equal to 3 months of base pay plus additional 1.25% for each year of complete service.	1 week of pay per year of service	Graduated severance schedule from 3 months pay to 3 months plus 1.5% salary or; graduated severance from 3 months pay to 3 months plus 1.5% salary plus lump sum of 10% base salary	10% of base salary plus graduated severance
Nevada (April 1995)	Current employees and Separated employees; supplemental training available for retained workers environmental restoration and waste management positions	Available through the State of Nevada Job Training Office; workshops, job fairs, etc.,	\$5,000 over a period of 3 years or \$10,000 over a period of 5 years; limited to areas of valid job opportunity	Early retirees are credited 3 years to service and age	1 week of pay per year of service maximum of 15 weeks	Dependent upon contractor; 1 week of pay per year with additional \$1000 for <15 years; 1.5 weeks of pay per year of service; 60% of salary	Not offered
Oak Ridge (November 1995)	Contractors will refer employees to publicly funded programs; also provide basic skills improvement	All affected employees under the plan; includes workshops, administrative support, skills assessments, etc.,	\$6,000 over a period of 3 years; pre-approval process	Not offered	Graduated severance schedule from .5 months pay to 1.5 months pay per year of service	Graduated severance schedule from .5 month to 1.5 months pay per year of service	Not offered

Site (Plan Date)	Training	Outplacement	Education	Early Retirement	Involuntary Separation Severance Pay	Severance Voluntary Separation	Lump sum Voluntary Separation
Pinellas (October 1996)	Current work force includes enhancing basic skills, retraining in environmental management, etc	All employees except those terminated for cause; job search training, individual counseling, resume preparation, cover letters, resource library, etc.	\$5,000 over a period of 3 years; limited to areas of valid job opportunity	Unreduced pension; regular supplement of \$10 per month for each year of pension benefit; special option of \$225 per month	Graduated severance schedule from 1.5 to 2 weeks per year of service; minimum of 4 weeks	Graduated severance schedule from 1.5 weeks to 2 weeks per year of service; minimum of 4 weeks	Not offered
Portsmouth and Paducah beginning (October 1997)	Impacted workers; training that fulfill the objectives of the planning guidance and section 3161	All affected employees; the extent of services provided will be planned in consideration of the number and classifications of employees expected to require assistance	Involuntarily separated workers only; maximum benefit of up to \$6,000 for up to three years from date of separation; no more than \$3,000 may be received in one year	Not offered	Graduated severance schedule from 1 week to 11.5 weeks of pay	Severance based upon contact with LMUS	Not offered
Richland (November 1996)	All 3161 eligible employees except retirees; up to \$10,000 for 3 years	All except retirees, contractor provided	\$10,000 over a period of 4 years; must begin within 1 year of termination; restricted to state-certified educational institution	Early retiree credited 3 years to service and age and a payment \$125 per month to social security	1 week of pay per year of service with maximum of 26 weeks	Contract severance of 1 week pay per year with maximum of 26 weeks	\$15,000

Site (Plan Date)	Training	Outplacement	Education	Early Retirement	Involuntary Separation Severance Pay	Severance Voluntary Separation	Lump sum Voluntary Separation
Rocky Flats (May 1997)	Retained employees under environmental management mission; separated employees under education assistance	Career assistance will be provided to those who need it	\$10,000 over a period of 2 years; plan of study to be approved within 1 year of termination	Not offered	1 week of pay per year of service with maximum of 26 weeks	Graduated severance between 25% of salary up to 100% of salary; graduated severance between 25% of salary up to 80% of salary	Not offered
Savannah River (May 1997)	Established various programs for retained workers	None	\$10,000 over a period of 4 years	Early retiree credited 3 years to service and age	1 week of pay per year of service with maximum of 26 weeks	2 weeks of pay per year of service up to 26 weeks of service	Not offered

5.2 Community Transition Guidance

The community transition program's existence is based upon language in the Section 3161 stating, "The Department of Energy should provide local impact assistance to communities that are affected by the restructuring plan and coordinate the provision of such assistance with—

- A. Programs carried out by the Department of Labor pursuant to the Job Training Partnership Act (29 U.S.C. 1501 et seq.)
- B. Programs carried out pursuant to the Defense Economic Adjustment, Diversification, Conversion, and Stabilization Act of 1990 (Part D of Public Law 101-510; U.S.C. 2391 note)
- C. Programs carried out by the Department of Commerce pursuant to title IX of the Public Works and Economic Development Act of 1965 (42 U.S.C. 3241 et seq.)"

To implement this provision, OWCT issued the first community transition guidance in March 1994. The guidance suggested that a CRO be formed to act as the community's voice to the Department for economic development issues. The CRO would develop local plans and proposals to receive DOE funding. The funding generally would be provided through two mechanisms: grants and cooperative agreements. The level of involvement the Department foresees in the project helps determine the funding mechanism. For, example, cooperative agreements anticipate substantial involvement between the Department and the recipients.

Unlike the numerous revisions the work force transition guidance has gone through, the community transition guidance has gone through only one large revision. The February 1997 guidance provided:

- Specific guidelines for recognition by DOE of the CRO;
- Description of roles and responsibilities for DOE headquarters and field personnel and CRO organization;
- Additional types of assistance and funding (start-up, planning, administrative, and project);
- Program and project assistance for sources other than CROs because some CROs prefer to be advisors rather than in a direct funding role;
- Requirement for a program review process and reporting;
- Recommendations for types of programs which might be successful based upon past experience including: as incubators, training seminars, and revolving loan funds; and
- Performance measures.

Also significantly, guidelines were provided for work force restructuring plans, the guidance suggests a range of \$15,000 to \$25,000 cost per displaced worker as an appropriate range for

community transition funding. The guidance indicates that communities should seek to create a job for \$10,000 to \$25,000 in Federal funding received. The guidance also suggests that CRO startup funding would not normally exceed \$100,000, and CRO planning assistance should be in the range of \$250,000 to \$500,000. Project assistance based on past practices indicates that projects last three to five years, and range between \$400,000 and \$5,000,000 a year.

5.3 Findings

Our review of the specific work force restructuring plans and the community transition plans indicated that they are consistent with Section 3161 and the guidances issued by OWCT. The plans were based on the direction and guidance received from OWCT. Community Transition plans are prepared by community organizations such as CROs to develop programs to minimize the social and economic impacts on the community. Community transition plans and programs are based on the guidance and form a consistent and uniform national program based on minimal direction in the law.

Chapter 6

Comparison with Other Restructuring Programs

DOD and private sector organizations also periodically undergo large transitions in work force structure and experience dislocations similar to DOE's. In order to assess the effectiveness and possibly the fairness of DOE's work force restructuring and community transition programs, Booz-Allen gathered benchmarks from similar dislocations experienced by DOD's major contractors, commercial enterprises, and affected communities.

We examined the limited information available from DOD, EDA, and private industry regarding plans, costs, and effects of major work force dislocations. We also examined several General Accounting Office (GAO) reports, DOD Section 8121 annual reports, and two independent surveys of private industry. This information was supplemented by a survey we conducted of major industry restructuring costs. In this chapter we compare, as available, DOD and private industry programs and costs with DOE's programs and costs.

6.1 DOE Work Force Restructuring Benefits and Costs

OWCT's goal for work force restructuring was to conduct voluntary and involuntary programs at an average cost per worker of \$25,000 or less. This was based on voluntary programs conducted by the Federal Civil Service of up to \$25,000 in severance payments. DOE's definition included the total cost for all severance and other benefits paid for all separated workers. Separated workers were defined to include workers that left through early retirement programs, voluntary incentives, attrition, involuntary programs, and release of temporary or fired employees.

DOE provided Section 3161 benefits at defense nuclear sites, and provided 3161-like benefits at non-defense sites. This was in response to the Secretary's directive to apply work force restructuring measures fairly at all sites.³¹ Elimination of classes of workers within sites and across sites may have served to potentially defuse potential legal challenges from workers. Importantly, a major source of anger between co-workers may have also been stopped by the elimination of separate classes of workers.³² Fairness of application of work force restructuring may also have served to avoid severe decreases in morale and performance by the remaining workers.

Figure 6-1, below, indicates the total cost and number of separations at defense nuclear and other DOE sites and compares the average cost of benefits per worker. The average benefit cost per worker is based upon detailed information provided by DOE field offices participating in work force restructuring for each FY from 1994 through 1997. The data includes expenditures at defense nuclear facility sites by major benefit category (i.e. severance, outplacement, relocation, retraining and medical). Voluntary and involuntary separations are detailed separately but aggregated to calculate the average benefit cost. The methodology for deriving the average

³¹ Secretary Hazel O'Leary stated that work force restructuring procedures should be applied wherever work force restructuring takes place in the Department in an April 21, 1993 Memorandum for Headquarters Elements entitled Establishment of a Task Force on Worker and Community Transition.

³² Workplace violence between co-workers was found to account for 20% of all incidents of work place violence in the 1993 study by Northwestern National Life Insurance Company.

benefit cost per DOE worker is the sum of all expenditures for applicable work force restructuring benefits divided by the sum of all workers receiving these benefits at defense nuclear facilities.

Figure 6-1.
Average Benefit Costs for Work Force Restructuring
at DOE Defense and Non-Defense Sites

Average Total Cost per Worker	Total Expended	Defense Sites		Total Expended	Non-defense Sites	
		Number of Separated Workers	Ave. Cost per Worker		Number of Separated Workers	Ave. Cost per Worker
Voluntary Separations	\$591,334,407	28,547	\$20,714	\$32,971,975	2,700	\$12,212
Involuntary Separations	\$128,289,945	10,579	\$12,128	\$9,639,264	862	\$11,182
Total	\$719,624,352	39,126	\$18,393	\$42,611,239	3,562	\$11,963

As shown, a total of \$719.6 million was expended on work force restructuring activities for separation of workers at defense sites. This yields an average cost of \$18,393 per defense nuclear site worker. Also as shown, the costs per worker at non-defense sites are less than the cost per worker at the defense sites.

6.2 DOD Work Force Restructuring Benefits and Costs

The end of the cold war also resulted in changes in missions, strategies, and force levels by DOD. These changes required a reduction in military forces and the reduction or cancellation of a number of ongoing or planned major system acquisitions. In response, the federal government closed a number of DOD bases, and contractors closed facilities or reduced work forces at their facilities.

In particular, the defense contractor industry underwent a number of work force restructurings in response to downsizing or cancellation of a number of major systems acquisitions. This was followed by a number of proposals for corporate mergers and acquisitions. In July 1993, DOD changed a long-standing practice and permitted defense contractors to charge certain restructuring costs to flexibly priced contracts if DOD determined that the business combination would result in lower costs to DOD or preserve a critical defense capability. Congress then passed legislation for conditions to be met before contractors could be reimbursed for restructuring-related expenses. The legislation required in part that:

- A senior DOD official certify that the projections of restructuring savings are based on auditable cost data
- DOD's share of projected savings exceeds allowed costs
- The Secretary of Defense reports to Congress on DOD's experience with defense contractor business combinations, including whether savings associated with each restructuring actually exceed restructuring costs

DOD has a four-step process for evaluating these restructuring proposals in compliance with the provisions of Public Law 103-337, Section 818. The first step is that the contractor submits a restructuring proposal including details on planned activities, projected costs and savings. These proposals are audited by the Defense Contract Audit Agency (DCAA). Following the audit, a DOD contracting official recommends whether the proposal should be certified. In cases of a favorable recommendation, a senior DOD official issues a written certification stating that the projected savings exceed the projected costs. This certificate allows the contractor to bill DOD for the costs, and it allows DOD to reimburse the contractor for the costs.

DOD has issued nine certifications for restructuring proposals associated with seven corporate combinations affecting at least 16 business units. Several other significant business combinations are currently under review. DOD has reimbursed costs for seven of the certified restructuring proposals. According to GAO these new business combinations will result in 21,362 layoffs. By the end of FY 1997, 17,859 personnel were estimated to have been laid off.³³

In addition to the approved business combinations and those under review, a number of restructuring activities took place either before DOD changed its practice or were conducted to respond to conditions not involving proposed business combinations. One example applicable to both conditions is an early retirement program conducted by Grumman in 1992. Approximately 4,000 employees participated in the program at a cost of \$360 million.³⁴ These costs were not reimbursed by DOD. Several years later costs for restructuring activities involving 450 employees incurred during the Northrop and Grumman-Vought business combination were reimbursed by DOD.

DOD contractors' restructuring plans contain projected costs and savings including the projected number of workers that may be severed and the cost of the benefits to be paid. To determine severance benefits, DOD contractors applied their pre-existing severance policies and union contract requirements. Projected cost estimates were based on factors such as seniority, wages, and other company and worker specific factors.

Existing corporate policies varied widely. For example in three cases, no severance benefits were paid. In these cases, extended notices of layoffs were generally made to the employees. Another example is that extended medical benefits were only available in one of the restructuring proposals. DCAA audited each of the proposals for compliance with existing corporate policies, compliance with the Federal Acquisition Regulations Part 31 and Defense Acquisition Regulations Part 231, and internal guidelines. For example, DCAA internal guidelines for severance pay are 1.4 weeks of severance per year of service for hourly workers and 2.4 weeks of severance per year of service for salaried workers.³⁵

DOD annual Reports to Congress under Section 818 of the NDAA contain information on seven business combinations involving 16 identifiable business units. From this information, we

³³ Information regarding the business combinations is available from two GAO reports, "Defense Restructuring Costs," GAO, GAO/NSIAD-97-97, April 1997 and "Defense Industry Restructuring," GAO, GAO/NSIAD-98-156, April 1998. Additional information is also contained in the DOD annual reports regarding Defense Industry Restructuring Costs. These reports are not publicly available since they contain confidential business information.

³⁴ Information provided by OWCT based on interview with Grumman personnel.

³⁵ This information was provided following a series of telephone interviews with officials at DCAA.

determined the types of termination benefits available under various plans. This is depicted in Figure 6-2.

Figure 6-2. Benefits Provided by DOD Restructuring Plans

Applicable	Instances in which Benefits Were Available			
	Severance	Relocation	Retraining	Enhanced Medical
16 Separately Identified Business Units	12	16	10	1

6.3 Comparison of Average Benefit Cost per Worker

Costs for certified reimbursable defense restructuring activities are summarized by the DOD in annual reports to Congress on restructuring costs. GAO has also estimated the costs and number of workers effected under defense restructuring in two separate reports. Neither series of reports indicates the relative seniority, pay scales compared to industry, or the types of voluntary and involuntary programs conducted by the companies. Therefore these costs per worker should be viewed as relative costs and may not be directly comparable. Figure 6-3 depicts the average benefit cost per worker as reported in DOD and the DOE work force restructuring programs.

Figure 6-3. Restructuring Cost Comparison

Agency	Benefits Cost/Worker					
	Severance	Outplacement	Relocation	Medical	Total	
DOD Restructuring	\$7,953	Assumed in other Costs	\$10,640	\$1,648	\$98	\$20,340
DOE Restructuring	\$15,528	\$515	\$27	\$1,518	\$805	\$18,393

The DOE average benefit cost per worker is based upon voluntary and involuntary separation costs at defense nuclear sites for fiscal years 1994 - 1997. All benefit categories are included in the average (i.e. severance, outplacement, relocation, retraining and medical). The average severance benefit paid by DOE (\$15,528) is higher than reported in DOD restructuring (\$7,953). The average relocation benefit paid by DOE is much lower than reported by DOD restructuring. The variability in the reported average benefit cost per worker between DOE and DOD suggests that the individual category definitions are different and these comparisons have no direct correlation. It appears the most appropriate comparison is in the aggregate with the DOD average benefit cost per worker reported as \$20,340 and the DOE average benefit cost per worker calculated as \$18,393.

6.4 Other Federal Agency Community Assistance Programs

DOD has relied upon federal community assistance programs in DOD's EDA to mitigate impacts. The DOD's Office of Economic Adjustment (OEA) and EDA's Defense Adjustment Program provide grants to communities suffering economic distress from defense restructuring.

OEA provides organization and planning assistance to communities affected by military base closures and major defense related work force reductions. EDA's Defense Adjustment Program supports the implementation of the planned economic recovery.

6.4.1 Other Federal Agency Community Assistance Program Provisions and Benefits

OEA's planning grants for an affected region last from three to five years, depending on the scale of the closure. Grant funding ranges from roughly \$1 million for a three year grant to \$3 million for a five year planning grant. Upon completion of the planning phase, community organizations such as regional planning authorities can apply for grants to support implementation of elements of the plan from the EDA's Defense Adjustment Program.

EDA operates two programs to encourage business development and job creation in communities suffering economic distress. The public works program is targeted at communities that meet certain economic distress criteria and present a strong, justified plan for use of an EDA grant. The Public Works Program has measured 203 of its projects for their job creation effects six years following project completions. The Defense Adjustment Program is similar to the public works program, but focuses on communities that are impacted by military base closures and work force restructurings at defense contractor facilities or military bases. The Defense Adjustment Program has measured 187 projects for their direct job creation benefits. The projects were broken into four categories:

- Completed construction projects
- Completed capacity building projects
- Completed revolving loan projects
- In process revolving loan projects

EDA's Defense Adjustment Program evaluates grant proposals based on the level of community distress as determined by an evaluation of economic criteria and other factors. Awards are made to communities that presented well-supported proposals and are facing the most severe economic crisis. Typical EDA projects include: expansion of water and sewer facilities to support an increased industrial workload, building access roads for industrial parks, construction of industrial parks, and focused market planning or technology feasibility studies. Figure 6-4 compares the community development support programs provided by DOE in response to Section 3161 and the combined OEA and EDA defense restructuring support programs.

Figure 6-4 Community Development Support Programs

Community Development Services	DOE Section 3161 Program	DOD-OEA & DOC-EDA Defense Adjustment Programs
Program Organization & Planning	X	X
Community economic re-use planning	X	X
Engineering and Marketing Feasibility Studies	X	X
SWOT Analysis	X	X
Program Operations	X	X
Water & Sewer facilities	X	X
Access Roads	X	X
Build Industrial Parks	X	X
Construct Business Incubator	X	X
Construct Technology Center	X	X
Loan Programs	X	X
Technology Transfer Studies		X
Port Improvements		X
Worker Retraining	X	
Venture Capital and Equity Positions	X	
Market Development and Promotion	X	
Continuing Economic Development Center and Planning Support	X	

As can be seen in the Figure 6-4, the federal agencies generally provide similar services and capabilities. EDA's Defense Adjustment program provides many of the same project sponsored services to DOD impacted communities as OWCT offers to DOE sites.

Similar to EDA's Defense Adjustment Program to support all defense related work force restructurings, there was a concerted federal effort to support economic development in communities in which DOD bases were closed. Job creation at DOD bases closed in 1988, 1991, and 1993 have been examined in detail by GAO and DOD.³⁶³⁷ Federal agencies provided over \$780 million in direct financial assistance to areas affected by the 1988, 1991, and 1993 rounds of base closures. This assistance was in numerous forms – planning assistance, training grants, and infrastructure improvement. Four separate sources of assistance each provided more than \$100 million in assistance. These sources are depicted in Figure 6-5.

³⁶ Military Bases: Update of the Status of Bases Closed in 1988, 1991, and 1993, US GAO, August 1996.

³⁷ Military Bases: Lessons Learned from Prior Base Closure Rounds, US GAO, July 1997.

Figure 6-5. Base Closure Community Assistance Grants

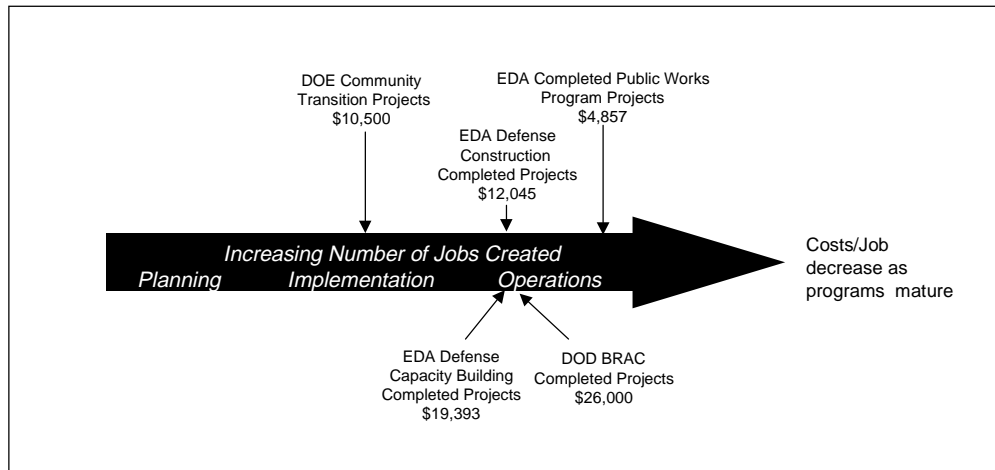
Source of Assistance	Total Funds in Millions
Federal Aviation Administration	\$182
EDA	\$154
OEA	\$120
DOL	\$103
Other Federal, State, and local resources	\$220

6.4.2 DOE Community Assistance Program Benefits

DOE's community transition programs are also heavily oriented towards job creation. It should be noted that DOE's programs have only been created in the last five years, and EDA's experience has found that job development cannot fully be measured until five or more years after project completion. Therefore EDA costs per job creation from the public works program should be viewed as a goal to be achieved or a best practice, rather than directly comparable with DOE's results to date.

Figure 6-6 depicts the estimated costs per job created and the relative maturity of each program. As programs mature their cost per job created decreases because additional jobs are created. For example, an industrial park may be only partially leased soon after the park is completed. After several years, this park may be fully leased and include several growing companies resulting in many additional jobs created due to the development of the industrial park. A review of the relative maturity and costs per job created in Figure 6-6 indicates that the DOE community transition programs are achieving a high degree of success in job creation compared with other federal programs. DOE's cost per job created through community transition projects is \$10,500.

Figure 6-6. Average Job Creation Costs



Although private sector companies infrequently provide funds for job development as a result of work force restructurings or facility closures, there are instances where funds or grants are provided to local communities. In general, this is a result of repayments of tax breaks or other incentive funds that may have been provided to the company. A work force restructuring announced in 1997 by Levi's provides one example of community support funds provided as a result of work force restructurings. Levi's is providing \$8 million in community support funds as a result of their restructuring efforts.

We compared the community transition funds available to communities affected by defense work force restructuring surrounding DOE defense nuclear facilities and DOD bases or defense contractor facilities. Our interviews with OEA indicate that communities in which there is a DOD base closure generally received between \$1 and \$3 million for community planning. The average cost for infrastructure project(s) at DOD defense adjustment sites is roughly \$9 million based on data sources provided by EDA. As shown in Figure 6-7, the sum of these figures compares favorably with OWCT community assistance monies provided to communities in the vicinity of DOE sites. Although these local communities are also able to apply for EDA project funding if they meet EDA's economic need criteria, only the communities at Idaho, Pinellas and Portsmouth indicated receipt of EDA funds.

The comparison of average cost per site is a gross measure and does not address difference in facility size and configuration, previous facility use, age or facility access. Nonetheless, on the average it provides some insight into the funding DOE and DOD have made to local communities affected by the end of the cold war. The average site cost for community assistance ranges from \$9.5 million to \$11 million per site. It should be noted that OEA refers to "Communities" in their reported data and the DOE data is aggregated by site. In some cases, such as Rocky Flats, Hanford and Oak Ridge, there are multiple communities surrounding the DOE sites which if calculated would lower the average DOE site cost for community assistance.

Figure 6-7. Comparison of Average Site Costs for Community Assistance

		1995	1996	1997	Total	# of Sites	Average
DOD							
	OEA	\$28.3M	\$40.1M	\$31.0M	\$99.4M	100 ³⁸	\$0.99M
	EDA	\$135.6M	\$109.7M	\$98.2M	\$343.5M	40	\$8.59M
DOE							
	OWCT	\$37.8M	\$37.2M	\$37.0M	\$112.0M	10	\$11.0M

6.5 Commercial Practices for Facility Closures

Several studies have been conducted on commercial work force restructuring practices. These studies identified typical practices by large commercial businesses and federal and state agencies. These studies identified that work force practices ranged from negative incentives for continuing employment to financial incentives for continuing employment for an extended defined period (i.e., golden handshake).

6.5.1 Commercial Practices Comparison

GAO surveyed 25 major companies to determine work force reductions and downsizing strategies. The survey found that at least 18 out of 25 companies (72 percent) provide incentives to employees to voluntarily separate.³⁹ The survey also found that most firms used hiring freezes and internal transfers before offering voluntary separation programs. A survey conducted by Actuarial Services Associates, Inc. found that it is common for companies to offer early retirement or voluntary programs before layoffs.⁴⁰ A survey conducted by Lee Hecht Harrison, Inc. of more than 3,000 human resources personnel respondents found that most firms provide outplacement, tuition, and other assistance to separated workers.⁴¹ The survey also found that 75 percent of firms that provided severance benefits provided one week per year of service. Extended medical benefits during the severance period were offered by 65 percent of the respondents.

Commercial responses to work force restructuring are thus similar DOE's. DOE work force restructuring plans frequently utilize internal transfers followed by voluntary programs before layoffs are used to separate workers. Outplacement and training is available for most separated workers. For most restructuring plans, severance benefits are calculated using the formula of one week per year of service (see Figure 5-2 in Chapter 5). Finally, DOE provides medical benefits for most separated workers who are not covered by other medical benefits plans.

³⁸ OEA refers to "Communities."

³⁹ Workforce Reductions, Downsizing Strategies Used in Selected Organizations, US GAO, March 1995, GAO/GGD-95-95-54.

⁴⁰ Ethan Lipsig et. al., Downsizing Law and Practice, Bureau of National Affairs, Inc., survey conducted by Actuarial Sciences Associates, Inc., Somerset, New Jersey.

⁴¹ Lee Hecht Harrison, Severance – A Benchmark Study, 1995.

6.5.2 Commercial Voluntary Separation Benefits Costs Comparison

Voluntary programs consist of early retirement programs and other programs to voluntarily separate from the company. Early retirement programs are on average the most expensive, but may yield the most savings. This is because these programs directly reduce the number of senior employees, which also are generally the most highly paid. Further these employees skills generally do not match new projects or missions and may require the most retraining.

We surveyed large US companies with a focus on industrial manufacturing to develop benefit costs information comparable to DOE contractors. Costs were established for separation benefits programs conducted in the 1990s for eight companies. Our survey of costs for voluntary programs was not able to distinguish the costs of early retirement separate from other voluntary programs. The costs of these programs ranged from \$40,000 to \$90,000. The average program cost more than \$60,000 per employee. In general, the higher costs per worker were incurred for early retirement programs with several estimates exceeding \$65,000. The DOE program costs of \$30,836 per worker compares favorably with commercial industry costs for voluntary separation programs.⁴²

Figure 6-8. Select Sample of Commercial Voluntary Severance Programs

Company	Program	# of Workers Separated	Benefit
Rockwell International 1998	Not Available	3,800	\$42,000/worker
Boeing 1995	Early Retirement Program	9,500	\$63,000/worker
Boston Edison 1995	Early Retirement Voluntary Severance	330	\$72,727/worker
		149	\$67,114/worker
Grumman 1993	Early Retirement	74,000	\$90,000/worker
AT&T Merrimack Valley Works, 1991	Voluntary Service	1,000	Up to \$40,135/worker

6.6 Findings

DOE achieved its goals of work force restructuring costs being equal to or less than \$25,000 per worker. The result compares favorably with federal and commercial restructuring practices as highlighted below:

- DOD reimburses work force restructuring costs in cases of new business combinations such as mergers or acquisitions. Reimbursement is based on existing contractor policies for severance benefits, and audited by DCAA to ensure compliance with policy and a savings to DOD at least twice the cost. In many cases, separated employees received severance, outplacement, relocation, and retraining.
- Offering voluntary separation packages by DOE follows common practices of large US manufacturing firms. The cost per worker for early retirement programs is less at DOE

⁴² This estimate includes early retirement and other voluntary costs per worker excluding attrition at defense nuclear sites.

than at large US manufacturers such as Boeing, AT&T, Eastman-Kodak, Grumman, and Rockwell.

- DOE cost of \$18,393 per person compares favorably with the work force restructuring costs paid by DOD. DOD cost estimates were on average \$21,143 and a GAO report on DOD costs incurred to date found a cost per worker of \$16,395.
- DOE's job creation costs from community transition projects of \$10,500 is less than the cost experienced by similar EDA and DOD defense restructuring projects of \$12,999 to \$26,000. As the projects mature, increasing returns can be expected as shown through analyses of more mature EDA projects.
- The types of community transition projects funded by DOE under Section 3161 and by EDA and OEA under Defense Adjustment programs are very similar. The most significant difference is the taking of equity positions and venture capital support provided by some DOE sponsored CROs.

Appendix A

Representative Sample of Companies by Site Receiving Community Transition Assistance

State	Site	Company	Description
ID	INEEL	Hyde Drift Boats	Sporting goods manufacturing
		Robinson Distributing	Sporting goods manufacturing
		Lynden Corp	Video conferencing software development
		Lockwood Packaging Corporation	Distributor of produce packaging equipment and materials
		Environmental Solutions and Technologies	Manufacturer of automotive parts washers
		Governet	Provider information databases via internet
		ID Tech	Manufacturer and distributor of electronic water flow meters
		Andersen Manufacturing	Manufacturer of satellite dishes and other metal products
		POLYSI	Mining and manufacturing of silicon compound used in electronic equipment
		Rio Products	Sporting goods manufacturing
NM	LANL	David Samora Woodworks	Provides quality woodworking and millwork
		Ayudantes	Nonprofit counseling services
		Chama Valley Manufacturing	Manufactures rock fall protection systems
		Leona's Foods, Inc.	Manufactures tortillas
OH	Mound	Mound Flextek, Inc.	Fabricates high volume flex circuits supplying consumer electronics and computer industries
		Mound Engineering & Analysis Group	Specializes in mechanical design, nondestructive testing and ISO/QS 9000 turnkey systems
		Mound Laser & Photonics Center	Specializes in the development and application of laser material processing
		Mound Manufacturing Center	Specializes in precision machining for the aerospace, medical and defense industries
		Mound Metrology, Inc.	Offers NIST traceable calibration services for a variety of measurement and test equipment
		Mound Metallurgical, Inc.	Provides full service material analysis through electron microscopy, metallography and mechanical testing
		Mound Technical Solutions	Offers system design, development and fabrication
		Mound Discovery Center	Specializes in surface science, providing answers to materials problems in manufacturing
		Porter House, Inc.	Provides environmental remediation consulting and training
		Precision Joining Technologies	Specializes in advanced welding processes
		Project Performance Corporation	Focuses on management consulting for environmental engineering and information systems
		Thaler Machine Company	Specializes in precision machining for tool work production and development
		Wheatville Technology	Provides analysis of small particles through IR microspectroscopy

State	Site	Company	Description
NV	NTS	Fluid Tech, Inc.	Specializes in equipment clean up, volume reduction, solidification and stabilization
		NRG Technologies	Commercializing alternative fuel technologies
		HELB (Hydrogen Enriched Lean Burn)	Commercializing renewable, low-emission technology for stationary power generators
		Kistler Aerospace Corporation	Development of two-stage reusable vehicles for delivering communication satellites into low-earth orbit
		Rocky Research	Explore new applications of Rocky Research's alternative fuel, thermal storage and refrigeration technology to improve the energy efficiency of various thermal products
		Carbon Regeneration Facility, Inc.	Proposing to regenerate activated carbon resulting from a variety of filtration systems
TN	Oak Ridge	American Technology, Inc	Fabricates containers and provides support services for the nuclear energy industry
		Southern Freight Logistics, Inc	Provides transportation locally and nationally
		Machine Kinetics Corporation	Designers and fabricators of prototypical models and manufacturing machinery
		Diversified Environmental Services	Specializes in waste processing services and equipment
		Quintek Corporation	R&D company focused on the commercialization of state-of-the-art measurement technologies
		Trism Environmental Services	Transporter of mixed, low level wastes
		Infrared Technologies	Engineers and fabricates heat treating and material annealing equipment using technology licensed from DOE
		Cook Heating and Air	Specializes in large, custom commercial HVAC systems, providing design, installation and maintenance services
		VasCon Foundation	Salvage and brokering agent for scrap machinery and waster materials that become available through the reindustrialization of ETTP
		East Tennessee Materials and Energy Corporation	Commercial mixed-waste processor which has a bartered a portion of their lease payment in exchange for remediation of contamination in the leased premises
		Blue Ridge Development	Business investment company which operates a business incubator at ETTP
		GLR Corporation	Specializes in environmental remediation and restoration
		PCC Enterprises, LLC	A joint venture of Pall US and Coors Technical Ceramics in which advanced filtration material is manufactured at ETTP
		Strip Technologies of America	Specializes in the removal and application of industrial coatings, and refurbishment/restoration of heavy machinery and vehicles
		Materials and Chemistry Laboratory, Inc.	Provides material characterization and chemical process optimization services to governmental and industrial clients

State	Site	Company	Description
FL	Pinellas	Dienamic Tooling Systems, Inc.	Heavy tool and die fabricator which service the automotive industry in the southeast
		Machine Kinetics Corporation	Designs and fabricators of prototype models and manufacturing machinery
		Concurrent Technologies Corporation (CTC)	Training and technical assistance to implement electronic commerce.
		Constellation Technology Corporation	State of the art technologies and products for radiation detection and instrumentation. Analytical Services and Laboratories for chemical and mechanical analysis of materials and substances.
		Custom Manufacturing & Engineering, Inc.	Manufacturing and engineering services for custom built or build to print components, assemblies and turnkey systems for a wide range of industries: defense/aerospace, medical, telecommunications and transportation.
		National Technical Systems (NTS)	One of twelve locations which provide state-of-the-art simulated and induced environmental testing services
		NOVA Precision Components	Complete "one-stop" production machining and tool room capability. Two, three, four and five axis CNC capability. Small and large production runs.
		Pace Technology, Inc.	Custom Hybrid Circuits, Solid State Power Controllers, 1553 Data Bus Products
		The ENSER Corporation.	Solutions for Battery Based Power Systems to include Thermal Batteries, Primary and Secondary Battery Packs
WA	Richland	TRAK Ceramics, Inc.	Ferrite and Low Loss Dielectric Components for RF/Microwave applications
		Advanced Diagnostics, Inc.	Provides medical diagnostics for treatment and monitoring
		Corona Catalysis Corporation	Manufacturing airborne bioactive particle and chemical detection devices, startup business
		Credit Card Solutions	Develops and sells client/server software to automate credit card purchases
		Current Environmental Solutions, LLC	Environmental remediation company focusing on soils remediation, startup business
		Gateskate, Inc.	Manufacturers sporting equipment
		Integrated Environmental Technologies	Environmental remediation technology development such as controlled plasma glassification, startup business
		MUNDO Communications Network	Long distance prepaid international phone card company, startup business
		ROM Therapeutic Equipment, Inc.	Design manufacturers therapeutic exercise equipment
CO	Rocky Flats	Virion Technology	Develops medical technologies for skin problems startup business
		Alpha Group & Associates	Health and safety services; radiation instrumentation, calibration; industrial hygiene; respiratory fit testing; engineering and administration
		Rose Biomedical Electronic fetal monitors	
		Bosonics	Programmable optimal beam form which steering over output fibers in telecommunications
		Applied Geospatial Solutions	Full scale GIS consulting to businesses

State	Site	Company	Description
		Broomfield Staffing	Temporary to permanent employment agency
		Judson Enterprises	Manufacturer of hand controls and lightweight metal and plastic products for handicapped individuals and health care facilities
		Expectations Child Care	Child care services for children and infants
		EcoProducts	Recycled plastic processing and manufacturing; development of co-extrusion for the encapsulation of chromium containing ash
		Bell Dental Products	Develop and manufacture dental motors and controllers
		Empowercom, Inc.	Manufacture telecommunications equipment
		CDM Optics	Develop and manufacture optical imaging lens systems using economic plastics and glass
		Engineered Coatings	Develop carbide metal coating for moving mechanical components that exhibit exceptional hardness, wear characteristics and toughness
		Nuclear Filter Technology, Inc.	Develop unique charcoal filters and two stage air cleaners for hazardous site cleanup
SC	Savannah River	Frisby Technologies, Inc.	Designs and manufacturers thermal products for personal, aviation, and building applications
		Digital Dimensions, Inc	Software and internet services
		Bridgestone-Firestone Corporation	Manufactures tires
		Palmetto Industries International	Designs and manufacturers shipping containers
		EFCO	Manufacturers extruded aluminum windows and doors
		Trident Manufacturing	Makes anodized metal
		Mud American Manufacturing	Fabricates metal/aluminum products
		American Tubing Products	Manufacturers tubing for automotive and heavy engine use
		MacLombo	Recycles plastics and poly-products to make plastic lumber
		Camovision	Manufacturers sports glasses

Appendix B

Economic Diversity at DOE Sites

Site		Primary Regional Economic Activities
	Hanford	Services (38%): engineering, health and business; Wholesale/Retail trade (8%); Manufacturing (5%); Construction (4%); DOE, Agri-business, Food Processing, High Technology
	Fernald	Manufacturing (24%): industrial machinery, paper and rubber products, printing, automotive products, and metal fabrication; Retail (15%); Services (30%): health, business, and engineering services; Construction, Agriculture
	Idaho (INEEL)	DOE related, Wholesale/Retail trade (15%); Services (30%) health and engineering; Construction (10%)
	Kansas City	Manufacturing (13%): printing, metal fabrication, and chemical products; Transportation and Utilities: communications, trucking and warehousing; Wholesale/Retail Trade (14%); Insurance and Finance (9%); Services (30%): health, legal, and engineering; Construction (5%)
	Lawrence Livermore NL	Manufacturing (11%): industrial, electronic, and automotive products, food products; Transportation (5%); Wholesale/Retail Trade (13%); Services (23%): health, business, and engineering; Construction (4%)
	Mound	Manufacturing (23%): metal machining and fabricating, paper products, industrial and electronic equipment, transportation equipment; Wholesale/Retail trade (24%); Services (29%): health and business; Government (12%); Finance/Real Estate (4%); Transportation & Utilities (5%); trucking; Construction (3%)
	Nevada	Services (36%): lodging, business, amusement, health, and engineering; Wholesale/Retail trade (10%); Finance (5%); Transportation (4%); Construction (8%);
	Oak Ridge	Manufacturing (27%): automotive, metal fabrication, textiles; DOE – Energy, Aerospace, Environmental Engineering
	Paducah	Manufacturing (13%); Wholesale/Retail trade (17%); Transportation and Utilities (7%); Services (23%): health, business, engineering; Agri-business,
	Pantex	Agri-business (8%); Manufacturing (40%); Services (30%) health and engineering services
	Pinellas	Construction (9%), Manufacturing (4%), Transportation (3%), Wholesale (10%), Retail (19%), Finance (10%), Services (39%): health, business, engineering
	Portsmouth	Manufacturing (44%): lumber and wood products, automotive, chemicals, and printing; Wholesale/Retail trade (15%); Services (16%): health and social; Government (12%); Construction (4%)
	Rocky Flats	Manufacturing (19%): industrial equipment and instruments - aerospace, information technology; pharmaceuticals; Wholesale/Retail trade (10%); Services (24%): business, health, and engineering; Agri-business
	Sandia	Construction (6%); Manufacturing (7%); Transportation and Utilities (4%); Wholesale/Retail trade (13%); Finance (4%); Services (28%): engineering, business, and health; DOE, Military, and University
	Savannah River	Manufacturing (42%): Agri-business, textiles, paper products and chemicals; Construction (7%); Wholesale/Retail trade (7%); Services (15%): health, business, and engineering
	Los Alamos	DOE-related services

Appendix C

Organizations Contacted

State	Site	Organizations
CA	Lawrence Berkeley National Laboratory	<ul style="list-style-type: none"> DOE Oakland
CO	Rocky Flats Environmental Technology Site (RFETS)	<ul style="list-style-type: none"> DOE Rocky Flats Operations Office Rocky Flats Local Impacts Initiative (RFLII) Local Chamber of Commerce
FL	Pinellas Plant	<ul style="list-style-type: none"> DOE Albuquerque Operations Office Triangle Consulting Local Chamber of Commerce
ID	Idaho National Nuclear Engineering Laboratory	<ul style="list-style-type: none"> DOE Idaho Operations Office Eastern Idaho Economic Development Council Local Chamber of Commerce
NV	Nevada Test Site	<ul style="list-style-type: none"> DOE Nevada Operations Office Nevada Test Site Development Corporation (NTSDC) Local Chamber of Commerce
NM	Los Alamos National Laboratory; Sandia National Laboratory; Pantex Plant	<ul style="list-style-type: none"> DOE Albuquerque Regional Development Corporation (Los Alamos) Agent for Cooperative Agreement between Los Alamos County and Regional Development Corporation Local Chamber of Commerce
OH	Mound Plant	<ul style="list-style-type: none"> DOE Ohio Field Office Miamisburg Mound Community Improvement Corporation (MMCIC) Babcock & Wilcox of Ohio Local Chamber of Commerce
OH	Fernald Environmental Management Site	<ul style="list-style-type: none"> DOE Ohio Field Office
OH	Portsmouth Gaseous Diffusion Plant/ Paducah Gaseous Diffusion Plant	<ul style="list-style-type: none"> DOE Portsmouth Office
PA	Pittsburgh Naval Reactors Office	<ul style="list-style-type: none"> DOE Pittsburgh Naval Reactors Office
SC	Savannah River Site	<ul style="list-style-type: none"> DOE Savannah River Site Savannah River Regional Diversification Initiative (SRRDI) Local Chamber of Commerce
TN	Oak Ridge	<ul style="list-style-type: none"> DOE Oak Ridge Office Community Reuse Organization of East Tennessee (CROET) Roane County Industrial Board Oak Ridge Centers for Manufacturing Technology Tennessee's Resource Valley American Nuclear Systems

		<ul style="list-style-type: none"> • Local Chamber of Commerce
WA	Richland Site	<ul style="list-style-type: none"> • DOE Richland Site • Tri-City Industrial Development Council (TRIDEC) • Pacific Northwest National Laboratory (PNNL) • Port of Benton • Tri Cities Enterprise Association • Sunna Systems Corporation • Benton-Franklin Private Industry Council • Applied Process Engineering Laboratory • Washington State University Tri Cities Business LINKS • Local Chamber of Commerce
D.C.	OWCT National Program	<ul style="list-style-type: none"> • Selected Congressional Staff • Department of Labor Job Training and Partnership Office • Department of Commerce Economic Development Administration (EDA) • Department of Commerce Bureau of Labor Statistics • US Census Bureau • Department of Energy Office of Worker and Community Transition (OWCT) • National Council on Urban Economic Development
VA	OWCT National Program	<ul style="list-style-type: none"> • Department of Defense Office of Economic Adjustment • Department of Defense Office of the Undersecretary of Defense Acquisitions and Technology • Star Mountain, Inc.

Appendix D

Source Materials

Albuquerque Operations Office:

- City of Espanola, New Mexico Revised Proposal.
- Community Project Santa Fe County.
- Eight Northern Indian Pueblos Council. Application for Feasibility Study.
- Northern New Mexico Community College Proposal. June 4, 1996.
- Tri-Area Association for Economic Development Proposal. Business Incubator Application for DOE funds.

Booz, Allen & Hamilton Surveys:

- Survey of twelve Department of Energy sites. Including information on work force reductions, and community transition funding.
- Survey of five Chambers of Commerces. Including: Idaho Falls, Idaho; North Las Vegas, Nevada; Pinellas County, Florida; Oak Ridge, Tennessee; and Boulder, Colorado.

Community Transition Guidances Dated: February 1994
January 1997

Defense Contract Audit Agency Documents:

- Projected Layoffs and Cost of Severance Benefits by Business Combination.

Department of Commerce, Economic Development Administration Documents:

- Fact Sheet: EDA Programs.
- Defense Adjustment Program. Performance Evaluation. Final Report November 1997.
- Public Works Program. Performance Evaluation. Final Report November 1997.

Department of Defense, Office of Economic Adjustment Documents:

- Community Guide to Base Reuse. May 1995.
- Converting Closed Military Bases to Centers for Education and Vocational Training. October 1996.
- Work Force Adjustment Strategies. October 1996.

Department of Energy, Office of Worker and Community Transition Documents:

- Annual Report on Contractor Work Force Restructuring for Fiscal Years 1995 and 1996. January 1997.
- Annual Report on Contractor Work Force Restructuring for Fiscal Year 1997. March 1998.
- Congressional Questions and Answers for FY97 and FY98
- Displaced Workers Questionnaire for Fiscal Year 1995.
- Field Organizations Community Transition Quarterly Progress Reports: FY93-95, FY 96 4th quarter, FY 97 1st quarter, FY 97 4th quarter
- Financial System Reports.
- Guidance for Funding Enhanced Benefits Under Section 3161. Dated: March 2, 1998.
- Harnessing the Market. The Opportunities and Challenges of Privatization. January 1997.
- Interagency Agreement between the USDOC's Economic Development Administration and the USDOE's Office of Worker and Community Transition.

- Letter to Terry Freese. From: Jimmie Hodges Portsmouth Field Office. Subject: Paducah Area Community Reuse Organization Application for Organization Start Up Planning Grant.
- Memorandum for the Chief Financial Officer. From: Robert W. De Grasse, Jr. Subject: Department of Defense Policies on Allowable Costs for Contractor Work Force Restructuring. Dated: May 26, 1998
- Memorandum to Headquarters Elements. From: Secretary of Energy, Hazel R. O'Leary. Subject: Establishment of a Task Force on Worker and Community Transition. Dated: April 23, 1993.
- Memorandum to Robert W. De Grasse, Jr. From: Albuquerque Operations Office. Subject: Annual Report for FY 1997. Dated: February 4, 1998.
- Memorandum to the Manager, Oakland Operations Office. From: Robert W. De Grasse, Jr. Subject: Request for Additional Funding to Cover Costs Associated with Workforce Restructuring at Lawrence Livermore National Laboratory. Dated: April 30, 1997
- National Defense Authorization Act for Fiscal Year 1993. Public Law 120-404, October 23, 1992. Subtitle E: Defense Nuclear Workers. Section 3161.
- National Stakeholder Workshop Summary Report March 13-15, 1996
- National Stakeholder Workshop Summary Report, September 13-15, 1995
- Need and Justification for the Worker and Community Transition Program March 1998
- Office of Worker and Community Transition Expected Accomplishments for FY 1998. Dated: August 1998.
- Office of Worker and Community Transition Website: <http://www.wct.doe.gov>
- Order DOE 3309.1A Dated November 30, 1992. Reductions in Contractor Employment.
- Pinellas Plant Transition Documents.
- Program Assessment Plan. January 15, 1997.
- Report on Work Force Restructuring Plans Completed During Fiscal Years 1993 and 1994. February 1996.
- Report to US Congress on Changes in Federal Contractor Employment from FY 96-FY 97. May 1997.
- The FY 99 Office of Worker and Community Transition Budget Request
- The FY 99 Office of Worker and Community Transition Budget Request Work Force Restructuring Backup Charts (2)
- Transitions Website: <http://www.transitions.org>

Department of Energy, Other Documents:

- Memorandum for Inspector General, Regarding the Audit of Work Force Restructuring at the Fernald Environmental Management Project.
- Memorandum for Inspector General Comments on Audit of DOE's Economic Development Activities at Pinellas, Mound, and Rocky Flats. Dated: November 22, 1996.
- Office of Inspector General, Audit of Economic Development Grants & a Cooperative Agreement With East Tennessee Not-for-Profit Organizations. Dated: October 22, 1996
- Office of Inspector General, Audit of Work Force Restructuring Under Section 3161 of the National Defense Authorization Act. Date of Issue: May 6, 1997.
- Office of Inspector General, Audit of Work Force Restructuring at the Fernald Environmental Management Project. Dated: April 23, 1996
- Office of Inspector General, Audit of Work Force Restructuring at the Oak Ridge Operations Office. Dated: August 3, 1995.

Department of Labor, Job Training and Partnership Act Office Documents:

- Defense Conversion Adjustment Program Fact Sheet.
- Defense Diversification Program Fact Sheet.
- Job Training Partnership Act Highlights Fact Sheet.

General Accounting Office Reports:

- Briefing Report to Congressional Requesters. Defense Contractors Pay, Benefits, and Restructuring During Defense Downsizing. October 1995.

- Report to Congressional Committees. Defense Industry Restructuring Updated Cost and Savings Information. April 1998.
- Report to Congressional Committees. Defense Restructuring Costs. Information Pertaining to Five Business Combinations. April 1997.
- Report to Congressional Requesters. Economic Development Limited Information Exists on the Impact of Assistance Provided by Three Agencies. April 1996.
- Report to the Chairman, Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight, House of Representatives. Military Bases: Update on the Status on Bases Closed in 1988, 1991, and 1993. August 1996.
- Report to Secretary of Energy. Energy Downsizing. Criteria for Community Assistance Needed. December 1995.
- Report to the Subcommittee on Energy and Water Development, Committee on Appropriations, House of Representatives. Department of Energy. Value of Benefits Paid to Separated Contract Workforce Varied Widely. January 1997.

Mound Site:

- “An End in Sight”. Work Force Restructuring Plan for the Contractor Work Force Fernald and Mound Sites. July 1997.
- “What Gets Measured Gets Done” Our Road Map for Excellence in Environmental Restoration and Employee/ Community Transition. Ohio Field Office Strategic Plan 1998-2005. March 1998.
- Commercialization Study of the Mound Facility Phase I.
- Community Transition Progress Report for Mound Advanced Technology Center, 2nd quarter FY 1998.
- Community Transition Progress Report for Mound Plant, 4th quarter FY 1997.
- EG&G Mound Applied Technology Capabilities at Mound. Technology for the Future of this Country. July 1993.
- Independent Technology Review of Mound Plant.
- Letter to Robert E. Williams. From: Nat Brown, Ohio Field Office. Subject: Approval of Involuntary Separations at Mound Site. Dated: February 4, 1997.
- List of funding granted to Mound Plant including local, state and federal funds.
- Memorandum for the Chief Financial Officer of Ohio Field Office. From: Acting Director Management Accounting and Pricing Divisions. Subject: Request for Exception to Full Cost Recovery for Lease Facilities. Dated: September 2, 1994.
- Memorandum of Agreement by and between the US Department of Energy Miamisburg Environmental Management Project and Miamisburg Mound Community Improvement Corporation. Dated: January 23, 1998.
- Memorandum to Earl N. Fray, President and General Manager, EG&G Mound Applied Technologies, Inc. From: J. Phil Hamric. Subject: 1996 Voluntary Separation Package Program. Dated: July 12, 1996.
- Memorandum to J. Bickel, Albuquerque Operations Office and K. Spankle, Ohio Field Office. From: Robert W. De Grasse, Jr. Subject: Funding Approval for \$500,000 for Community Strategy Grant. Dated: May 24, 1994.
- Memorandum to John K. Weithofer, City of Miamisburg. From: Michael J. Kepler, Ohio Field Office. Subject: US DOE Grant DE-FG24-93AL97147. Dated: July 22, 1996.
- Memorandum to Michael J. Kepler, Contracting Officer, Ohio Field Office. From: Kenneth A. Sprankle, Ohio Field Office. Subject: MMCIC Economic Development Grant. Dated: April 26, 1996.
- Memorandum to MMCIC. From: Ohio Field Office. Subject: US DOE Grant DE-FG-24-93AL97147. Dated: May 16, 1996.
- Memorandum to the Field Manager, Ohio Operations Office. From: Robert W. De Grasse, Jr. Subject: Concurrence in implementation of the Ohio Work Force Restructuring Plan at Mound. Dated: September 11, 1997.
- Miamisburg Mound Community Improvement Corporation (MMCIC). Progress Report 1996.
- Miamisburg Mound Comprehensive Reuse Plan. Final Comprehensive Reuse Plan. January 1997.
- Miamisburg Mound Economic Development Plan. March 1995.
- Mound Advanced Technology Center Brochure.

- Mound Reuse Committee Report. September 1994.
- Project baseline summary for Ohio Field Office. From: http://www.em.doe.gov/pbs/ml_151.html.
- Project narratives to accompany above summary. From: http://www.em.doe.gov/pbs/n_151p3.html
- Sales Agreement by and between US Department of Energy and Miamisburg Mound Community Improvement Corporation. Attachments. Dated: January 23, 1998.

Nevada Test Site:

- Assistance for Economic Development Efforts to Mitigate Effects of Downsizing at DOE Nevada Operations Office Facilities, 1996.
- Assistance for Economic Development Efforts to Mitigate Effects of Downsizing at DOE Nevada Operations Office Facilities, Implementation Grant II, 1997.
- Kisler Corporation Brochure
- NTS Development Corporation Plan to Action.

Oak Ridge Complex:

- “The Oak Ridge Vision 2001” hard copy presentation.
- Centers for Manufacturing Technology Customer Survey and Brochure.
- East Tennessee 2000 Economic Development Plan.
- Manufacturing Skills Campus Brochure.
- Roane County, Tennessee Report April 1998.
- Technology 2020 Brochure.
- Tennessee’s Resource Valley Brochure and Marketing Plan.
- Various newspaper articles.

Other Sources:

- Actuarial Sciences Association, Inc. Survey.
- Cinotta, Gene. Vice President for Compensation and Benefits, Northrop-Grumman. Personal Conversation with Thearin Wendel, July 29, 1998.
- Colorado Martin Marietta Astronautics Defense Conversion Project. OECI Clearinghouse.
- Colorado Rocky Flats Plant, Dislocated Workers Retraining and Readjustment Program. OECI Clearinghouse.
- Coopers & Lybrand, Inc. “Using DOE’s Assets of the Past to Build a Bridge to the Future.” Report to Office of Worker and Community Transition. February 1998.
- Department of Energy, Office of Environmental Management. “Paths to Closure: Accelerating Clean-Up.” Draft, July 1998.
- Department of Energy, Office of Environmental Management. Environmental Management’s Core Database.
- Gilotn, Robert. “Stalking Local Economic Development Benefits: A Review of Evaluation Issues.” Economic Development Quarterly Vol. 6 No. 1, February 1992. Pp. 80-90.
- Grant II, Don Sherman; Wallace, Michael; and Pitney, William. “Measuring State-Level Economic Development Programs 1970-1992.” Economic Development Quarterly Vol. 9 No. 2, May 1995. Pp. 134-145.
- Lee Hecht Harrison. Severance-A Benchmark Study, 1995.
- Lipsig, Ethan et al. *Downsizing Law and Practice*. Bureau of National Affairs, Inc.
- List of Base Closings-Job Impacts, OECI Clearinghouse.
- National League of Cities. “Local Officials Guide to Defense Economic Adjustment.”
- President’s Economic Adjustment Committee. “Planning Civilian Reuse of Former Military Bases.” 1991.

Personal Email:

- From: LeviStrauss@levi.com. To: Wendy Gehring. Regarding Levi's Benefit Package. Dated: May 4, 1998.
- From: Nruenzel@ebmail.gdeb.com. To: Wendy Gehring. Regarding Electric Boat Benefit Packages. Dated: May 11, 1998.

Press Releases:

- At a Glance. From: <http://www.bedison.com/bse/annreport96/at-a-glance-a.html>
- AT&T Little Rock Facility to Stay Open. From: <http://www.att.com/press/1091/911010.nca.html>
- Benefits for Fired Employees. From: http://www.toolkit.cch.com/text/P05_8410.stm
- Boeing Offers One-Time Retirement-incentive Program to Reduce Layoffs. From: <http://www.boeing.com/news/releases/1995/news.release.950324.html>
- California Employment Training Panel Awards Job Training Funds to McDonnell Douglas. From: <http://www.boeing.com/news/releases/mdc/97-83.html>
- CMP Plans Employee Severance. From: <http://www.fosters.com/news98/march/03/xme0303a.htm>
- Electric Boat Early Retirement Plan May Avert Quonset Layoffs. From: <http://www.pbn.com/wo82195/eboat.htm>
- Healthcare Labour Adjustment Agency. From: <http://www.hlaa.org/news/bulletin/notesjan.htm>
- IBM: More Layoffs Possible. From: <http://www.nynews.com/archive/bz60920a.htm>
- Rockwell to Spin Off Semiconductor Unit to Shareholders. From: <http://www.rockwell.com/news/pressrel/PR980629.html>

Portsmouth Gaseous Diffusion Plant:

- National Council on Urban Economic Development. Final Report: Industrial Development and Venture Capital Strategy. April 1998.
- Southern Ohio Diversification Initiative. Community Transition Plan. August 1997.

Richland Site

- One Stop Career Center Systems presentation by Northwest Policy Center.
- Hard Copy of presentation by Bechtel Hanford, Inc.
- Letter. Subject: Annual Site Full Time Equivalent Staff Forecast. Dated: October 15, 1997.
- Community Transition Progress Report. 2nd quarter FY 1998.
- Tri-City Industrial Development Council (TRIDEC) Community Based Proposals for FY 1998. August 1997.
- Special Retirement/Voluntary Reduction of Force Program, 1988.
- Southeast Washington Area Brochure.
- Hanford and the Tri Cities Economy for FY 1997.
- Organizations that Provide Support to Small Business and Entrepreneurs in Tri Cities Area. November 1996.
- Business Creation Through Technology Commercialization.

Rocky Flats Environmental Technology Site:

- Rocky Flats Local Impact Initiative provided a summary of their program. August 1998.

Savannah River Site:

- Memorandum. Subject: Savannah River Regional Diversification Initiative Request for Community Transition Funds. Dated: October 1997.
- Savannah River Regional Diversification Initiative. Economic Development Plan for the Central Savannah River Area. Final Report December 1995.

Star Mountain, Inc.

- Letters regarding Outplacement Support Services at Oak Ridge Complex.
- Outplacement Support Services Presentation (hard copy).
- Work Force Restructuring Best Practices Report Summary. January 1996.

Work Force Restructuring Plans (by Site and Date):

- Fernald Environmental Management Project:
February 1995
- Grand Junction Project Office:
September 1996
- Hanford Site:
February 1995
November 1996
- Idaho National Nuclear Engineering Laboratory:
May 1996
- Kansas City Plant:
June 1994
- Lawrence Berkeley National Laboratory:
January 1996
- Los Alamos National Laboratory:
June 1995
- Mound Plant:
May 1994
- Naval Petroleum Reserves:
July 1995
- Nevada Test Site:
April 1995
- Oak Ridge Complex:
August 1993
May 1995
November 1995
- Pinellas Plant:
October 1996
- Portsmouth Gaseous Diffusion Plant/Paducah Gaseous Diffusion Plant: October 1997
- Princeton Plasma Physics Laboratory
August 1996
- Rocky Flats Environmental Technology Site:
May 1997
Addendum November 1995
- Ross Aviation:
May 1994
- Savannah River Site:
May 1997

Work Force Transition Guidances Dated: April 22, 1993

March 24, 1994

April 5, 1995

February 1996

Draft May 1998

Appendix E

List of Acronyms

APEL	Applied Process Engineering Laboratory
COBRA	Consolidated Omnibus Budget Reconciliation Act
CRO	Community Reuse Organization
CROET	Community Reuse Organization of East Tennessee
DCAA	Defense Contract Audit Agency
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DP	DOE/Defense Programs
EDA	DOC/Economic Development Administration
EM	DOE/Environmental Management
FIS	DOE/Financial System
FAA	Federal Aviation Administration
FY	Fiscal Year
GAO	General Accounting Office
GOCO	Government Owned-Contractor Operated
INNEL	DOE/Idaho National Nuclear Engineering Laboratory
JOBBS	Job Opportunity Bulletin Board System
M&O	Management and Operations
MATC	Mound Advanced Technology Center
MMCIC	Miamisburg Mound Community Improvement Corporation
NDAA	National Defense Authorization Act for Fiscal Year 1993
NTS	DOE/Nevada Test Site
OEA	DOD/Office of Economic Adjustment
OMB	Office of Management and Budget
OWCT	DOE/Office of Worker and Community Transition
PCIC	Pinellas County Industry Council
PETC	DOE/Pittsburgh Energy Technology Center
PNNL	Pacific Northwest National Laboratory
Qs&As	Questions and Answers
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
RFETS	DOE/Rocky Flats Environmental Technology Site
RL	DOE/Richland Site
SRS	DOE/Savannah River Site
STAR	Pinellas Science, Technology, and Research Center
TDC	Technology Deployment Center
TRIDEC	Tri-City Industrial Development Council
WPPS	Washington Public Power Supply System